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ABSTRACT

A full report is presented of testimony on teacher preparation given by witnesses before the subcommittee on postsecondary education. Included are the remarks and prepared statements of the following witnesses: (1) Marie D. Eldridge, Administrator of the National Center for Education Statistics, who discussed survey data on making teacher education curriculum more rigorous, raising the criteria for entering teacher education programs, and extending the teacher education program beyond four years; (2) C. Emily Feistritzer, of Feistritzer Associates, who presented an analysis of data pertaining to enrollments of students, numbers of people going into teaching, salaries of teachers, and economic conditions of schooling; (3) David G. Imig, Executive Director of the American Association of Colleges for Teacher Education, who reported data regarding student population, teacher education faculty, curriculum revision, standards, funding of education departments, and examples of innovative practices; and (4) Phillip C. Schlechty, Professor of Education, University of North Carolina, who explored issues of student teacher quality and the number of teachers who are now being graduated and hired by school systems. (JD)

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OVERSIGHT ON TEACHER PREPARATION

ED241507

HEARING

BEFORE THE

SUBCOMMITTEE ON POSTSECONDARY EDUCATION

OF THE

COMMITTEE ON EDUCATION AND LABOR HOUSE OF REPRESENTATIVES

NINETY-EIGHTH CONGRESS

FIRST SESSION

HEARING HELD IN WASHINGTON, D.C., ON NOVEMBER 17, 1983

Printed for the use of the Committee on Education and Labor

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OVERSIGHT ON TEACHER PREPARATION

THURSDAY, NOVEMBER 17, 1983

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON POSTSECONDARY EDUCATION,
COMMITTEE ON EDUCATION AND LABOR,
Washington, D.C.

The subcommittee met, pursuant to call, at 10:05 a.m., in room 2257, Rayburn House Office Building, Hon. Paul Simon (chairman of the subcommittee) presiding.

Members present: Representatives Simon, Penny, Coleman, Gunderson and Petri.

Also present: Representative Packard.

Staff present: William A. Blakey, counsel, and Marsha Wice, legislative assistant; and Electra C. Beahler, minority counsel.

Mr. SIMON. The subcommittee will come to order.

Today, the Postsecondary Education Subcommittee continues its oversight on teacher preparation.

In the process of reauthorizing the Higher Education Act of 1965, the subcommittee will look closely at Title V, which traditionally has been the teacher preparation title. Recent reports of several national commissions and task forces have concentrated many of their recommendations on improvements in teacher preparation and certification.

The merit pay task force, which I chaired, also addressed a number of issues in teacher preparation: Recruiting more able students into teaching, raising standards for schools of teacher education, competency testing of teacher graduates, intensifying course work and reorienting undergraduate curriculums in education, and raising standards for beginning teachers.

The task force recognized that raising teachers' pay will not in itself produce better teachers and raise student achievement. I would add, however, that we recommended that there be a general pay increase for teachers and another recommendation was that we raise the standards for starting teachers and raise the pay for starting teachers at the same time.

There was consensus that we must be assured that teachers are also well prepared, and that they have sufficient opportunity for professional development.

In today's hearing we will be receiving testimony from witnesses who have conducted research on teacher preparation. First, we will hear from Marie Eldridge, Administrator of the National Center for Education Statistics. NCES recently has released the results of a survey of schools of education regarding their activities designed to improve their departments and enhance teacher quality.

Second, we will hear from Dr. Emily Feistritzer, who will report on data she has gathered recently for the Carnegie Foundation's report, The Condition of Teaching: A State-by-State Analysis which formed the basis of the Carnegie Foundation's important study, High School.

Third, we will hear from David Imig, executive director of the American Association for Teacher Education, whose members represent the 1,300 schools of teacher education. AACTE has been concerned about the condition of teacher preparation schools, and has surveyed its members on a number of issues.

Finally, the subcommittee will hear from Dr. Phillip Schlechty of the University of North Carolina. Dr. Schlechty is well known for his involvement with the Charlotte Mecklenburg plan to create a career ladder for teachers. His study explores the issues of student teacher quality and the number of teachers who are now being graduated and hired by school systems.

I think we will take all four witnesses. If the four of you can take seats as a panel, then we will hear from all four of you and then ask questions.

First, Marie Eldridge, the director of the National Center for Education Statistics. Pleased to have you here again.

STATEMENT OF MARIE D. ELDRIDGE, ADMINISTRATOR, NATIONAL CENTER FOR EDUCATION STATISTICS

Ms. ELDRIDGE. Thank you, Mr. Chairman. I am also pleased to again be afforded the opportunity to appear before you during these important hearings on the higher ed reauthorization.

This morning, at your invitation, I am going to discuss information on the views of educators concerning the improvement of teacher preparation. The bulk of the material that I am going to be discussing this morning was obtained by NCES in a recent survey which we conducted at the request of the National Commission on Educational Excellence, during the process of their deliberations, I might add.

I would first like to begin with a brief description of the nature of the institutions that train our teachers in order to set this in some perspective. I will then summarize the findings of the major survey that I want to discuss today.

Prospective teachers are trained in approximately 1,200 institutions throughout the country. In 1980 and 1981, these institutions awarded 108,000 bachelor degrees in education. That represents a 30-percent reduction over the number of degrees awarded just 5 years prior in 1975–76, during which period 155,000 degrees were awarded.

We have classified the institutions into four groups: Those offering the doctoral program, those offering substantial graduate work but not a doctoral degree, the general baccalaureate, and specialized education institutions.

The general baccalaureate degree institution, rather surprisingly, made up about one-half of the 1,200 institutions, but awarded fewer than one-fifth of the bachelor degrees in education.

The doctoral and comprehensive institutions, on the other hand, represented less than half of the institutions, but awarded roughly four-fifths of the baccalaureate degrees.

I think this is particularly important to note in that it indicates that the majority of the baccalaureate degrees are being granted by institutions that clearly are currently established to provide graduate training.

We see a similar situation in terms of the public and private institutions. Although only about two-fifths of the teacher preparation institutions are publicly controlled, they awarded nearly four-fifths of the bachelor degrees in education.

Now then, education majors comprised about 80 percent of the entire pool of newly qualified teachers according to our recent survey of recent college graduates. The other 20 percent consists of graduates who receive degrees in fields other than education but were also qualified to teach.

Now I would like to summarize the survey findings from the work we did for the national commission. The first area, and one you just previously mentioned, deals with improving the quality of teacher candidates.

A recent study comparing 1980 high school seniors with those in the 1972 class provided disturbing evidence on the declining numbers and academic ability of students who said they were planning to teach.

In 1980, those aspirants who intended to major in education scored lower on standardized tests on vocabulary, reading, and mathematics than did other college-bound seniors.

Our data also indicates that these high school juniors and seniors who said they intended to aspire to become teachers had lower high school grades and took fewer courses in science and mathematics than did students choosing other majors.

While the college-bound seniors in general scored lower on tests in 1980 than in 1972, as the table in my prepared testimony indicates, in both years prospective education majors scored below those electing other fields.

Other studies have yielded similar findings. Thus, it is not surprising that when we conducted our survey, almost all, specifically 94 percent, of the Nation's teacher training institutions reported that they had implemented one or more measures to improve the quality of teacher candidates during the 5 years.

In our survey we asked about three possible measures for improving candidate quality: Making the curriculum more rigorous or challenging; raising the criteria for entering teacher education programs, and extending the teacher education program beyond 4 years.

Our respondents indicated that introducing more rigor into the curriculum and raising entering criteria had been widely implemented during the past 5 years. Over four-fifths reported making the curriculum more rigorous and almost three-fourths reported having raised the criteria for entrance.

Perhaps these increased requirements account at least in part for the decrease in the number of graduates with bachelors degrees in education.

Moreover, about half of the institutions indicated that implementation of these two policies—making the curriculum more rigorous and increasing the entrance requirements—appeared to be viable as methods for raising candidate quality.

On the other hand, judging from the decrease in the ability level of prospective education majors that I have already noted, one may suspect that high school seniors are either not fully aware of or are not particularly concerned about any changes in education requirements or curriculum demands that may be introduced.

Mr. SIMON. If I may interrupt, we have a rollcall and we are going to have to take a 10-minute recess. I will be right back. I apologize.

[Recess]

Mr. SIMON. The subcommittee will resume.

We were hearing from Marie Eldridge.

Ms. ELDRIDGE. Thank you, Mr. Simon.

The third measure we queried the deans on: extending teacher education beyond 4 years—received little support from our survey respondents. I personally found this a very significant sense, as I indicated earlier, more of the ed baccalaureates are generated in institutions which have a strong graduate program. And yet, there appears to be relatively little support based on our survey findings for extending teacher education beyond the 4 years.

Only 5 percent had, in fact, extended their programs and only 15 percent expressed a high preference for doing this. Admittedly, these findings contrast sharply with the recommendations of a number of the recent commission and special study reports.

The reasons for the lack of support for extending program length have not been documented by us. It may, however, represent a belief by directors of teacher education programs that such a change is undesirable, infeasible, or both.

One can understand the resistance to increasing a 4-year program to 5 years if as many contend entering salaries are not even adequate to attract students to a 4-year program.

I would like to turn now to the second area of concern: Improving the quality of the curriculum as another possible avenue for upgrading teacher preparation.

Our respondents showed considerably less agreement with each other here than they did on methods for raising candidate quality. Increasing the amount of general noneducation studies or of student teaching received high importance ratings from less than a third of the directors of the educational programs.

Increasing professional education studies was a distinctly unpopular option. Only 15 percent of the directors rated this as highly important.

In short, there seemed to be a general endorsement of a frequently heard criticism of teacher preparation, too much theory and methods courses, and perhaps little substantive merit.

Critiques of current teacher training frequently cite the limited subject-matter background of education majors. Of our respondents, 71 percent considered that it was at least moderately important to increase general studies requirements, placing greater emphasis on such areas as language communication skills followed by mathematics and science.

The third area deals with graduation requirements. Our findings here indicate that prospective teachers are generally required to complete more credit work and professional education studies than in student teaching. The specific figures are provided in my formal testimony.

Requirements in these areas vary widely from one institution to another. Based on an average of 120 credits for graduation, the typical requirements in professional education studies and student teaching constitute about 35 percent of the total credits at the elementary level and 24 percent at the secondary level.

Now, you basically can double those figures when you consider that these courses are taken primarily in the last 2 years of the college curriculum. Therefore, the 35 percent of the total credits in elementary level perhaps equate to 70 percent of the work taken in the last 2 years in college, and that 24 percent at the secondary level probably equate to almost half of the course work taken in the junior and senior year in college.

I would also finally like to make a brief comment about the fourth topic we queried the institutional directors on, namely, the financial effects of raising standards.

Virtually all commentators on educational problems and solutions stress that additional spending is a necessary, although not sufficient, condition for major improvement in the quality of teacher training.

Some of the financial burden associated with improvement may fall on the institutions themselves, according to our respondents. Nearly a quarter of the directors indicated that a significant increase in standards would have a major and adverse financial effect on their institutions. Another 44 percent thought that the institutions would be moderately affected. The remaining one-third felt that the financial effect would be insignificant.

So, basically, in terms of the financial effects, we had roughly one-third of the institutions indicating that it could be handled under the current fiscal arrangement.

Mr. Chairman, this completes my testimony. I would be pleased to answer any questions at your pleasure.

Mr. SIMON. Thank you very much.

[The prepared statement of Marie D. Eldridge follows:]

PREPARED STATEMENT OF MARIE D. ELDRIDGE, ADMINISTRATOR, NATIONAL CENTER FOR EDUCATION STATISTICS

I am pleased to have an opportunity to provide this subcommittee with information on the views of educators concerning the improvement of teacher preparation. This information was obtained in a recent survey conducted by the National Center for Education Statistics (NCES) through its Fast Response Survey System.

The Fast Response Survey System was established by NCES so that data urgently needed for educational planning and policy formulation could be collected quickly and with minimum burden on respondents. To expedite data collection, surveys are confined to no more than a single page of policy-related questions. Design of samples, as well as questionnaires, is such that policy makers have results within three months of questionnaire mailout.

My report will begin with a brief description of the institutions that train teachers. I will then summarize the survey's findings on four topics:

Improving the quality of teacher candidates; improving the quality of the teacher education curriculum; requirements for graduation from schools of education; and financial effects of raising these teacher preparation standards.

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CHARACTERISTICS OF TEACHER TRAINING INSTITUTIONS

Prospective teachers are trained in approximately 1,200 schools, departments, and colleges of education throughout the country. (In my remarks, I will refer to all of these simply as "institutions" and to their deans, department heads, *et al.* who responded to our survey as "directors.") In 1980–81, these institutions awarded 108,000 bachelor's degrees in education—a substantial decrease (30 percent) from the total of 155,000 awarded in 1975–76. (See Table 1.)

The 1,200 institutions were classified into four groups: doctoral, comprehensive (having a strong graduate program but not significantly engaged in doctoral level training), general baccalaureate (primarily undergraduate), and specialized (e.g., business, religion, teacher training). The general baccalaureate group made up about half (49 percent) of the 1,200 institutions but awarded fewer than one-fifth (18 percent) of the bachelor's degrees in education. Doctoral institutions, on the other hand, made up only 11 percent of the institutions but awarded 31 percent of the bachelor's degrees. Comprehensive institutions constituted about one-third (32 percent) of the institutions and awarded almost half (47 percent) of the bachelor's degrees. Specialized institutions accounted for the remaining 8 percent, awarding 3 percent of the degrees.

Publicly controlled institutions awarded a large majority of the bachelor's degrees in education. Although only about two-fifths (38 percent) of the teacher preparation institutions are publicly controlled, they awarded nearly four-fifths (78 percent) of the bachelor's degrees in education.

Education majors comprise about 80 percent of the entire pool of newly qualified teachers, according to NCES's latest Survey of Recent College Graduates. The other 20 percent consists of graduates who received degrees in fields other than education but were also qualified to teach. In 1979–80, newly qualified teachers at the bachelor's level numbered about 132,000; this total included approximately 106,000 education degree recipients plus 26,000 additional graduates with other majors.

Now I would like to address the first area of concern in teacher preparation: Improving the quality of teacher candidates.

A recent study comparing 1980 high school seniors with those in the 1972 class provided disturbing evidence on the declining numbers and academic ability of students planning to teach. Not only did fewer 1980 seniors intend to major in education, but they did not appear to be as well qualified academically as students pursuing other fields. (See Table 2.)

In 1980, college aspirants who intended to major in education scored lower on standardized tests of vocabulary, reading, and mathematics than did other college-bound seniors. The prospective education majors also had lower high school grades and took fewer courses in science and mathematics than did students choosing other majors. Comparable information from a 1972 study suggests that the poorer performance of aspiring education majors is not a new phenomenon. While college-bound seniors in general scored lower on tests in 1980 than in 1972, in both years prospective education majors scored below those electing other fields.

Other studies have yielded similar findings. Thus it is not surprising that almost all (94 percent) of the nation's teacher training institutions reported that they had implemented one or more measures to improve the quality of teacher candidates during the past 5 years.

In our Fast Response Survey, we asked about three possible measures for improving candidate quality. They were:

Making the curriculum more rigorous or challenging; raising criteria for entering teacher education programs; and extending the teacher education program beyond four years.

Our respondents indicated that the first two measures had been widely implemented during the past 5 years. Over four-fifths (85 percent) reported making the curriculum more rigorous and almost three-fourths (74 percent) had raised the criteria for entrance. Perhaps these increased requirements account, at least in part, for the decrease in number of graduates with bachelor's degrees in education. Moreover, about half of the institutions indicated that they highly preferred making the curriculum more rigorous or raising entrance requirements as methods for raising candidate quality (52 percent and 47 percent respectively). (See Table 3.) Judging from the decrease in ability level of prospective education majors that I have already noted, one may suspect that high school seniors are not fully aware of, or are not concerned about, any changes in entrance requirements or curricular demands that may have been introduced.

The other possible measure—extending teacher education beyond 4 years—received little support from our survey respondents. Only 5 percent had extended

their programs and only 15 percent expressed a high preference for doing so. These findings contrast sharply with the recommendations made in the Carnegie report (High School—A Report on Secondary Education in America by Ernest L. Boyer), in the testimony of many authorities to the National Commission on Excellence in Education, and in the current education literature. The reasons for the lack of support for extending program length have not been documented. It may represent a belief by directors of teacher education programs that such a change is undesirable, infeasible, or both. One can understand the resistance to increasing a 4-year program to 5 years if—as many contend—entering salaries are not even adequate to attract students to a 4-year program.

In interpreting responses to questions of improving quality of candidates, it must be kept in mind that institutions have only limited control in this area. Self-selection of applicants for the education curriculum plays a major role in determining the pool of candidates from which the institution may select entrants.

Second, I'd like to turn to improving the quality of the curriculum, as another possible avenue for upgrading teacher preparation. Our survey asked for ratings of the importance of each of three possible measures:

Increase the number and/or quality of credit hours in general studies (i.e., courses offered outside the education school/department, such as humanities, arts, and sciences);

Increase the amount of required student teaching; and

Increase the number of credit hours in professional studies (i.e., courses offered by the school/department of education as part of teacher preparation, exclusive of practice teaching). Examples of such courses are Foundations of Educational Thought and Practice; Analysis of Teaching at the Secondary School Level; and Philosophy of Education.

Our respondents showed less agreement with each other here than they did on methods for raising candidate quality. Increasing the amount of general non-education studies or of student teaching received high importance ratings from less than a third (30 percent and 28 percent respectively) of the directors. (See Table 4.)

Increasing professional education studies was a distinctly unpopular option. Only 15 percent of directors rated this as highly important, with 41 percent saying it was of low importance. In short, directors of schools, colleges, and departments of education seem to endorse a frequently-heard criticism of teacher preparation: too many theory and methods courses with perhaps little substantive merit.

Critiques of current teacher training frequently cite the limited subject-matter background of education majors. Although only 30 percent of our respondents considered it highly important to increase the amount of general, non-education studies, another 41 percent considered that it was at least moderately important to increase general studies requirements. When asked which of three specified areas should receive greater emphasis, they most often chose language communications skills (79 percent), followed by mathematics (65 percent) and science (45 percent).

At this point, I would like to share with you a few observations on the ways in which different types of institutions differ in their responses to questions of quality improvement.

Preferences for raising entrance criteria and for making the curriculum more rigorous were similar for doctoral, comprehensive, and general baccalaureate institutions. Moreover, the three types of institutions had implemented these measures to a similar degree. Extending the program beyond 4 years was favored more by doctoral institutions than by other types; however, doctoral institutions were no more likely to have implemented this option.

Specialized institutions differed significantly from the other institutions on two issues with respect to candidate quality: First, specialized institutions were less likely to have high preference for raising criteria for entrance. Second, they were more likely to have made the curriculum more rigorous during the past 5 years.

Different types of institutions varied in their opinions of methods to improve the curriculum—most notably, specialized institutions stood apart from other types. (However, the number of specialized institutions is small, so that many of the apparent differences were not statistically significant.) One difference that was significant concerned the importance of professional education studies. Not one of the specialized institutions considered this area to be very important for improving the curriculum.

Publicly controlled institutions differed from their privately controlled counterparts on relatively few points. Public institutions did express a higher preference for raising entrance standards and for extending the length of the program than did private institutions. Moreover, proportionally more public institutions reported that

they had already raised entrance c[illegible]ria. Another difference was that public institutions attached higher importance to increasing professional education studies.

Third, our findings on graduation requirements indicate that prospective teachers are generally required to complete more credit work in professional education studies than in student teaching. (See Table 5) National averages were:

For elementary level candidates, 31 credits of professional education studies and 10 credits in student teaching; and for secondary level candidates, 19 credits of professional education studies and 10 credits in student teaching.

Requirements in these areas vary widely from one institution to another. For example, about 10 percent of institutions require 46 or more credits of professional education studies in the elementary program, and 10 percent require 19 or fewer hours. Based on an average of 120 credits for graduation, the typical requirements in professional education studies and student teaching constitute about 35 percent of total credits at the elementary level and 24 percent at the secondary level. Most teacher preparation programs require 4 years, with only about 5 percent having 5-year programs.

Finally, I would like to make a brief comment about a fourth topic, the financial effects of raising standards.

Virtually all commentators on educational problems and solutions stress that additional spending is a necessary although not sufficient condition for major improvement in the quality of teacher training. Some of the financial burden associated with improvement may fall on the institutions themselves, according to our respondents. Nearly a quarter (23 percent) of the directors indicated that a significant increase in standards would have a major and adverse financial effect on their institutions. Another 44 percent thought that the institutions would be affected moderately; the remaining 33 percent felt that the financial effect would be insignificant.

This completes my testimony. I will be glad to answer any questions on the data that NCES has available.

ATTACHMENT 1

TABLE 1.—DISTRIBUTION OF EDUCATIONAL INSTITUTIONS WITH ELEMENTARY OR SECONDARY TEACHER EDUCATION PROGRAMS IN 1982–83 AND BACHELOR'S DEGREES IN EDUCATION CONFERRED IN 1980–81, BY INSTITUTIONAL TYPE

Type of institution	Institutions with elementary or secondary teacher education programs		Bachelor's degrees in education conferred in 1980–81 [1]		Average number of bachelor's degrees per institution [2]
	Number	Percent of total	Number	Percent of total	
Total	1,206	100	108,000	100	96
Type of institution					
Doctoral	130	11	33,800	31	264
Comprehensive	386	32	51,700	48	134
General baccalaureate	590	49	19,600	18	36
Specialized	100	8	3,300	3	45

[1] Estimated for the sample from the earned degrees portion of NCES' Higher Education General Information Survey (HEGIS) for academic year 1980–81. Data on bachelor's degrees in education were missing from this file for an estimated 78 institutions.

[2] Based on institutions reporting bachelor's degrees in education.

Note.—Percents may not add to 100 because of rounding.

ATTACHMENT 2

TABLE 2.—AVERAGE VOCABULARY, READING AND MATHEMATICS TEST SCORES OF COLLEGE-BOUND SENIORS, BY SEX AND INTENDED FIELD OF STUDY: SPRING 1972 AND 1980

Field	Male		Female	
	1972 seniors	1980 seniors	1972 seniors	1980 seniors
Vocabulary test (15 Point maximum):				
Education:				
Average score	6.50	6.20	8.05	6.59
Standard error	.32	.35	.18	.20
Other field:				
Average score	8.19	7.43	8.49	7.31
Standard error	.09	.07	.10	.08
Reading test (20 Point maximum):				
Education:				
Average score	10.59	9.59	11.88	9.99
Standard error	.35	.52	.21	.27
Other field:				
Average score	12.03	11.16	12.35	10.84
Standard error	.10	.09	.11	.09
Mathematics test (19 Point maximum): [2]				
Education:				
Average score	12.03	10.90	11.96	10.20
Standard error	.36	.44	.22	.24
Other field:				
Average score	13.95	12.88	12.85	11.36
Standard error	.08	.08	.10	.09
Sample size:				
Education	267	172	692	595
Other field	3,754	5,195	3,256	5,297

[1] College-bound seniors include those who indicate that they expected either to attain some college in the future or to be enrolled in college for academic or vocational training in the year following high school.

[2] Caution should be exercised in interpreting change in mathematics scores because scores were based on 19 common items out of 25 items. Differences in levels of difficulty of the other 6 items may have affected time in which to complete the 19 common items.

Note.—Precision of the estimates may be calculated using the standard error following procedures provided in the Data Sources in the Appendix.

Source: U.S. Department of Education, National Center for Education Statistics, "Education Attracts Fewer Academically High Achieving Young Women," Bulletin, December 1982, and National Longitudinal Study of the High School Class of 1982 and High School and Beyond Study, unpublished tabulations (September 1982).

ATTACHMENT 3

TABLE 3.—INSTITUTIONAL PREFERENCES FOR METHODS TO IMPROVE TEACHER CANDIDATE QUALITY AND IMPLEMENTATION OF THESE METHODS IN THE PAST 5 YEARS, BY INSTITUTIONAL CHARACTERISTICS: UNITED STATES, WINTER 1982–83

[In percent]

Institutional characteristics	High preference[1]			Implemented in past 5 years[2]		
	Make curriculum more rigorous	Raise entrance criteria	Extend program beyond 4 years	Make curriculum more rigorous	Raised entrance criteria	Extend program beyond 4 years
Total	52	47	15	85	74	5
Type of institution						
Doctoral	56	53	28	83	75	6
Comprehensive	54	52	17	84	78	10
General baccalaureate	54	47	11	86	74	3
Specialized	33	23	9	96	64	3
Control						
Public	57	58	21	82	83	6
Private	49	40	11	88	69	5

[1] Respondents were asked to check high, medium or low to indicate their degree of preference for each measure. Within each category of institution, only the percent of high ratings is reported. Therefore, percents are not additive.

[2] Respondents were asked to check yes or no to indicate whether their institution had implemented each of the measures during the past 5 years. Within each category of institutions, only the percent of yes responses is reported.

ATTACHMENT 4

TABLE 4.—INSTITUTIONAL PREFERENCES OF METHODS TO IMPROVE THE QUALITY OF UNDERGRADUATE TEACHER EDUCATION CURRICULUM, BY INSTITUTIONAL CHARACTERISTICS: UNITED STATES, WINTER 1982–83

[In percent]

Institutional characteristics	High importance[1]		
	Increase general studies	Increase student teaching	Increase professional studies
Total	30	28	15
Type of institution			
Doctoral	29	24	17
Comprehensive	32	25	23
General baccalaureate	32	29	11
Specialized	17	38	0
Control			
Public	28	25	21
Private	32	29	11

[1] Respondents were asked to check high, medium or low to indicate the importance of each method to improve the curriculum for undergraduate teacher preparation at their institution. Within each category of institution, only the percent of high ratings is reported. Therefore, percents are not additive.

ATTACHMENT 5

TABLE 5.—AVERAGE NUMBER OF CREDIT HOURS REQUIRED IN UNDERGRADUATE TEACHER EDUCATION PROGRAMS, BY INSTITUTIONAL CHARACTERISTIC: UNITED STATES, WINTER 1982–83

Institutional characteristic	Elementary		Secondary	
	Professional studies	Student teaching/ practicum	Professional studies	Student teaching/ practicum
Total	31.3	10.5	19.0	9.8
Type of institution				
Doctoral	34.3	10.9	19.6	9.4
Comprehensive	30.6	10.7	18.1	9.8
General baccalaureate	31.7	9.8	19.4	9.4
Specialized	28.6	13.0	19.3	14.7
Control				
Public	31.8	11.1	18.6	10.1
Private	31.0	10.1	19.3	9.6

Mr. SIMON. Emily Feistritzer, if I am pronouncing this correctly——

Ms. FEISTRITZER. That is correct.

Mr. SIMON [continuing]. From Feistritzer Associates. Pleased to have you here.

STATEMENT OF C. EMILY FEISTRITZER, FEISTRITZER ASSOCIATES

Ms. FEISTRITZER. Thank you, Mr. Chairman.

Thank you for inviting me to testify before your subcommittee on the condition of teaching and teacher preparation in this country.

I am a former classroom teacher and former teacher educator and have spent the last 5 years of my life publishing in the field of education with heavy focus on teacher education. Most recently I wrote the report for the Carnegie Foundation for the advancement of teaching called "The Condition of Teaching: A State-by-State Analysis."

Mr. SIMON. If I may interrupt you simply to say if all the witnesses wish to put your complete statements in the record and summarize, that may be helpful because in about 50 minutes two of us are going to have to be over on the floor on a conference committee on the tribally controlled college bill.

Ms. FEISTRITZER. I would like to briefly summarize for the subcommittee the findings of the condition of teaching.

The results of my analysis of a considerable amount of data pertaining to enrollments of students, numbers of people going into teaching, salaries of teachers, economic conditions of schooling, and so on, lead me to conclude that there is a growing crisis in teaching in this country that relates directly to quantity and quality issues.

According to the National Center for Education Statistics, Marie Eldridge's organization, the number of new teacher graduates decreased from 314,000 in 1971 to 132,000 in 1981. That is a drop of 60 percent over the decade.

The most obvious reason for a decline in numbers of persons choosing teaching over that decade is directly related to what was happening the population of school-age children and enrollments in the Nation's elementary and secondary schools. Between 1972-73 and 1982-83, elementary school enrollment in this country dropped 11 percent, and secondary school enrollment dropped 18 percent, for an average of 14 percent total.

That means that last year there were 6½ million fewer students to be taught in public elementary and secondary schools than there were 10 years earlier.

So I think that the data on declining number of new teacher graduates needs to be looked at in that context.

The National Center for Education Statistics also projects that that trend of declining enrollments will reverse in 1985-86 due to what some of us call a mini baby boom of the late 1970's. The burst of children born in that period will be reaching school next year and it is projected that we may be facing shortages of preprimary and elementary school teachers starting next year and lasting throughout the 1990's.

If the trend in declining numbers of new teacher graduates continues, there could be a very severe problem in having enough teachers to teach students in classrooms based purely on enrollments.

The enrollment issue, I think, which relates directly to demand for teachers also needs to be looked at in a context of the changing demography of the United States and population shifts. The population has shifted significantly from the northeast and north central States to the south and southwestern States. These are the States that have realized not only overall population growth but they have also realized significant increases in their enrollments. Between the decade of 1972-73 and 1982-83, only seven States in the country had an increase in their public elementary and secondary school enrollments, and they are all located in the Southern part of the United States, and particularly in the Southwest.

Another factor that will affect the demand for new teachers is what is happening to minority population and enrollment changes. The minority population in the United States has increased significantly in a relatively short amount of time due to both immigration and to a more rapid birthrate of minority families than is currently occurring in the white populations.

So you have States in the country where you have heavy concentrations of minorities, increasing enrollments of minority children rather significantly. And these are the States where new teacher graduates have the highest failure rates in competency testing that are being introduced in those States. I think that issue, too, needs careful attention.

Overall, it is projected that the demand for new teacher graduates will be, as I said earlier, in preprimary and elementary schools and in specific subject areas. The demand for new teachers will not be uniform around the country nor will it be uniform across all disciplines.

Another issue that the report pointed out and has substantial evidence to support is that there is a declining quality of people choosing teaching.

I know that the utilization of scholastic aptitude test scores of high school juniors and high school seniors saying they want to major in education when they get to college is weak. But it is substantial in its support of the fact that those students who say they may want to go on into education are not scoring very well.

The SAT scores of intended education majors in 1973 scored 59 points below the national average in 1973. That gap widened to 81 points below the national average in 1983. Over the decade from 1973 to 1983, SAT scores across the country declined with some slowdown in the last 2 years. And one reason given for the overall declining SAT scores of students is that there are more students taking tests and there is a strong correlation between the fact that as more students take the test, the scores go down.

However, it supports even more the declining quality of people saying they want to major in education because there are fewer of those students taking the test. So as the gap widens with fewer students intending to major in education, I think it points to an even more severe problem of SAT scores of intended college majors.

Marie Eldridge also pointed out the NCES national longitudinal study data in the high school and beyond study indicates that college freshmen intending to major in education score lower than other intended majors of college freshmen on a variety of measures.

Last, on the quality issue, I think that we have a very wide gap of missing data in what happens between intended college majors in education and the people who actually teach.

However, competency test results of persons graduating from colleges of teacher education trying to get certified to teach certainly give us some evidence that we may have a quality problem with people going into teaching. The State of California's minimum competency test which is a test that they expect all persons holding a bachelor's degree to be able to pass, which has to do with reading comprehension, mathematic skills, and basic literacy. Of the persons that took that test last May trying to get a credential to teach, 68 percent failed it.

In Florida, the passage rate for its minimum competency test is 85 percent; only 38 percent of the blacks who took the minimum competency test in the State of Florida trying to get certified passed the test.

In Alabama, the passage rate of its test is 81 percent and in Georgia, 86 percent.

These are not competency tests that measure much beyond basic skills.

Other data pointing to a crisis in teaching which we find is not over one-third of the teachers polled by the National Education Association recently said if they had to do over again they would not go into teaching. That is compared with 11 percent 20 years ago, and 12 percent a decade ago.

The most recent Gallup poll of the public's attitudes toward public schools, 45 percent of the respondents said they would like to have a child of theirs take up teaching and 75 percent said they would like to see a child of theirs go into teaching 15 years ago. That is a considerable drop.

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Last, salaries of teachers are low and have dropped significantly in purchasing power. There is no question about the fact that the salary issue is a critical one in attracting high caliber people into the teaching profession.

Our data shows that while per pupil expenditures increased 22½ percent in real dollars since 1972—that is, I think, a substantial increase in moneys spent per pupil enrolled in school—per capita income increased by 6½ percent; total personal income in the Nation increased by 17.8 percent; the average salary of a classroom teacher dropped by 12.2 percent.

So even though the average salary of a classroom teacher in current dollars doubled in purchasing power, it lost by 12.2 percent.

The salary issue of teachers, I think, needs to be looked at skeptically and carefully. It varies radically from State to State, as our report indicates, and as my written testimony clarifies.

Some States have raised teacher salaries significantly and probably don't need to do a whole lot more. Other States have hardly touched teacher salaries and need to do a lot. So the salary issue of teachers, I feel, is not an across-the-board issue.

I would like to conclude my testimony with some data about institutions of higher education that are preparing teachers. As I indicated earlier, the number of new teacher graduates dropped 60 percent from 1971 to 1981. That was the decade in which 95 more institutions were added to those preparing teachers, according to our count of NCES's list of teacher preparation institutions.

There were 1,130 institutions of higher education granting education degrees in 1970 and 1971. That number has increased to 1,225. The number of institutions which awarded 25 or fewer education degrees at all levels—bachelors, masters—in 1971 grew to 346 in 1981. That is a significant number of institutions granting fewer than 25 education degrees.

Of the 1,130 institutions of higher education, 88 conferred fewer than 10 education degrees at all levels in 1971. That number increased from 88 to 142 last year.

Over half of the institutions of higher education which conferred degrees in education in 1981 are located in seven States. Six of those States have had the most severe enrollment declines of any States in the Nation at the elementary and secondary level.

Teachers have never been a very mobile lot. There is considerable data that indicate that classroom teachers generally train to be teachers and teach within a 150-mile radius of where they were born. That issue, I think, needs to be looked at in the context of the fact that most of our teacher training institutions are located in areas of the country where there is not a significant demand for new teachers.

Last, the overall conclusion that I draw related to the condition of teaching in this country has to do with the fact that I think we are mixing apples and oranges. On the one hand, while we are trying to negotiate and demand salaries of teachers commensurate with other white collar professionals such as accountants, lawyers, and doctors, we are not requiring of them anywhere near the rites of passage that those persons have to go through to get into those professions.

I think we do not have ladders, career ladders, within teaching; we do not have stringent performance criteria that they have to meet; we don't have gradations of salary scales based on anything other than the number of years they have been in the classroom and/or the number of courses they have taken at the local university.

I think the salary issue for teachers needs to be looked at in the context of what is demanded of them on the entry level and I think we need to raise the standards of excellence, the criteria for admittance into the teaching profession. I think adding rigor to the profession and rigor to what is required as teachers enter the teaching profession will attract many more academically able people and make it much easier to raise the salaries of teachers.

I conclude my testimony. Thank you very much.

Mr. SIMON. Thank you very much.

[The prepared statement of C. Emily Feistritzer follows:]

PREPARED STATEMENT OF C. EMILY FEISTRITZER, ON THE CONDITION OF TEACHING

Mr. Chairman and Members of the Subcommittee, thank you for inviting me to testify before your subcommittee on the condition of teaching in the United States. I have been reporting in detail what is going on in this field for the past five years through our newsletter, Teacher Education Reports, and several specialized reports on educational personnel development. I am a third-generation educator from Kentucky. I taught high school mathematics and science for eight years and received my Masters degree in the Teaching of Science through the National Science Foundation (NSF) Summer Institute Program for teachers. While teaching, I co-authored a unified science textbook for secondary school students—also funded by NSF. Having received a Ph. D. in education from Indiana University, I became a teacher educator, director of the federally funded Teacher Corps project and dean of a graduate school. Before starting a publishing company in 1979, I coordinated the National Teacher Development Initiative for the U.S. Office of Education which was deeply involved with Title V of the Higher Education Act.

Most recently, I engaged in extensive analyses of data pertaining to teaching and the factors affecting teaching in American schools. The results of that work are published in The American Teacher (Feistritzer Publications, March 1983) and The Condition of Teaching: A State-by-State Analysis (the Carnegie Foundation for the Advancement of Teaching, August 1983).

Analyses of existing data pertaining to teaching in the United States leads me to conclude that there is a growing crisis in teaching that relates to both quantity and quality of people going into the occupation. Not only are fewer people choosing to teach, but the caliber of those who say they want to become teachers is declining.

QUANTITY ISSUES

The National Center for Education Statistics (NCES) reports that the number of new teacher graduates descreased from 314,000 in 1971 to 132,000 in 1981. As a percentage of bachelor's degrees, new teacher graduates dropped from 37 percent to 12 percent over the same period. NCES also reports that the proportion of college freshmen intending teaching as a probable career dropped from 19 percent in 1970 to five percent in 1982. Women comprised 75 percent of those signalling intent to major in education in both years. However, of the total number of female college-bound seniors, the proportion intending to major in education dropped from 19 percent in 1972 to 10 percent in 1980. The College Entrance Examination Board data show that fewer than five percent of high school seniors who took the Scholastic Aptitude Test (SAT)[1] in 1983 said they wanted to major in education when they got to college—down 50 percent since 1973.

The most obvious reason for the decline in numbers of persons choosing teaching as a career over the last decade is the fact that demand for new teachers has been low. Public elementary school enrollment decreased 11 percent and public secondary

[1] Approximately one-third of all high school seniors take the SAT in this country. Two-thirds of all high school graduates who go to college take the SAT.

school enrollment dropped 18 percent from 1972-73 to 1982-83. There are 6.5 million fewer students enrolled in the nation's public elementary and secondary schools than there were a decade earlier.

Enrollments of students in elementary and secondary schools have been declining because of a drop in birth rates in the United States in the 1960s and most of the 1970s, reducing the demand for teachers. However, due to a baby boomlet in the late 1970s, an upturn in enrollments is forecast for pre-primary and elementary schools in the mid-1980s and for secondary schools in the late 1990s. If current projections of people intending to go into teaching hold up, the country will experience a shortage of elementary teachers by the mid-1980s just as the late 1970s bumper crop of babies is starting school.

Student enrollment is not the only variable affecting demand for teachers. In addition, efforts to keep student-teacher ratios down and replace teachers who leave the profession contribute to the demand. NCES projects increases in elementary school enrollments from 1986 to 1990 and foresees student-teacher ratios improving only slightly. Also, it expects a constant turnover rate of existing teachers (six percent per year) with 197,000 additional teachers hired per year from 1986 to 1990. This represents an expected increase from 134,000 additional teacher hirings for each year from 1981 to 1985. Likewise, it is projected that the supply of graduating teachers will average a little over 200,000 per year during that period. However, if the percentage of new teacher graduates who enter the teaching profession resembles the number in 1980, then the annual supply of new teachers will average only about 160,000 per year, and thus a sizeable across-the-board shortage could evolve.

Projections in terms of supply and demand are difficult, however, for a number of reasons. On the plus side of the ledger, for example, there are many unemployed licensed teachers, a reserve pool from which school systems might draw. On the deficit side, many currently employed teachers indicate they would leave teaching now for any good opportunities elsewhere. Thus, it is difficult to project with a great deal of precision whether there will be a shortage in the teaching force in the immediate years ahead, and if so, to what extent.

There never has been, is not now, and probably never will be an across-the-board demand for teachers. But there has been, is, and will be a demand for teachers in certain regions of the country, in specific content areas and at different grade levels. The demand for teachers throughout the 1980s and 1990s will shift as the number of students enrolled in American schools changes by grade level, region of the country, and ethnic background. Demand for teachers in the 1980s will be heaviest in grades K–8. The demand for teachers will logically be where enrollments are on the rise—and that's in the Sunbelt region.

The population of the United States is shifting from the large industrial states in the Northeast and North Central regions to the "Sunbelt" areas of the South and Far West. Two decades ago, 30.7 percent of the total population lived in the South, 15.6 percent in the West, 28.9 percent in the North Central states, and 24.9 percent in the Northeast. By 1981, the proportion living in the South had increased to 33.6 percent, and the proportion in the West rose to 19.3 percent. The proportion of the population living in the North Central region had dropped to 26.7 percent, the proportion living in the Northeast dropped to 21.5 percent.

Only seven states, all in the South and the West, increased their enrollments in public elementary and secondary schools in the past decade. Utah had the largest increase: 20.7 percent overall, representing a 35.3 percent increase in enrollment in public elementary schools and one of 4.0 percent in public secondary schools. Utah's total population increased by 36.9 percent during this period. Wyoming had the second highest increase in public school enrollment from 1972–73 to 1982–83. Its 18.9 percent reflected a 30.6 percent increase in elementary schools and 5.6 percent increase at the secondary level. Wyoming's total population grew by 44.7 percent during this decade.

QUALITY ISSUES

Even though teaching has never attracted the best and brightest, the gap between the academic caliber of those choosing teaching and almost every other field is widening dramatically. This is true nationally and in each state. Since 1973, the average SAT score for persons indicating education as a major fell from 59 points below the national average to 81 points below the national average SAT score in 1983. The average SAT score itself fell from 926 in 1973 to 849 in 1983. One reason given for the drop in the national average is that there are more students taking the test. This makes the picture of declining SAT scores for intended education majors even grimmer since there are far fewer of them taking the test.

In addition to providing such SAT data, NCES's National Longitudinal Study of 1972 and its High School and Beyond Study of 1980 showed that college aspirants who intended to major in education scored lower on standardized volabulary, reading, and mathematics achievement tests than other college-bound seniors. The prospective education majors also averaged lower high school grades and fewer courses in science and mathematics than students intending other majors. This is largely attributed to the fact that many bright women who fifiteen years ago chose teaching because they perceived it as the highest profession available to them and/or so that they could provide a second income for their families in a job which allowed them to be home with their children after school and in the summer, are no longer choosing teaching. The best and brightest women are now going into professions that offer money and prestige—and that is not teaching. This becomes especially important against the historical tradition that women have formed—and continue to form—70 percent of the teaching force in this country.

I know that utilizing SAT scores, grade point averages and achievement test scores of high school juniors and seniors and of college freshmen who say they intend to major in education in college is weak data in support of declining caliber of persons going into teaching. We do not have much data on the academic caliber of those who actually go on to graduate and become teachers. However, several states that are initiating minimum competency tests for prospective teachers report very grim data about the passage rates of those tests. For example, only 68 percent of persons seeking a credential to teach in California passed the state's competency test last May. Other states' passage rates for their own basic skills tests are: Florida, 85 percent (blacks, 38 percent, whites, 92 percent); Alabama, 81 percent, and Georgia 86 percent. Arkansas, in pilot testing its recently enacted testing program for all teachers found that 47 percent of its black teachers would have failed to meet the cutoff point and three percent of the whites would have failed.

OTHER DATA POINTING TO A CRISIS IN TEACHING

Over one third of the teachers (36 percent) polled by the National Education Association recently said they either certainly or probably would not become a teacher if they had it to do over again—compared with 11 percent 20 years earlier and 12 percent a decade ago.

In the 1983 Gallup Poll of the Public's Attitudes Toward the Public Schools, 45 percent of the respondents said they would like to have a child of theirs take up teaching as a career—down from 75 percent fifteen years earlier. In 1983, one-third of the respondents said "no" to the question, compared to 15 percent in 1968.

Salaries of teachers are generally low and have dropped significantly in purchasing power in the last decade. While per-pupil expenditures increased 22.5 percent in real dollars since 1972, per capita income by 6.5 percent, total personal income by 17.8 percent, the average salary of a classroom teacher dropped by 12.2 percent.

Salaries of teachers vary considerably from state to state. Alaska paid its teachers an average of nearly $34,000 per year in 1982–83, whereas Mississippi paid its teachers a little over $14,000 a year. Proposals to raise teachers salaries in every state by a set amount need to be critically examined. Each state's overall population, school enrollment, and general economic situation need to be considered. Some states already have increased teachers' salaries significantly. Wyoming, for example, nearly tripled the average salary of its classroom teachers in the last decade (from $9,292 in 1972–73 to $24,000 in 1982–83), whereas several states in the Northeast and North Central regions showed no significant increases in teacher salaries. States in the Frostbelt were hit hardest by the recent economic recession. They also show the slowest population growth and the greatest enrollment declines. Sunbelt states, on the other hand, are experiencing overall population growth and greater overall income to support bursts in elementary and secondary school enrollments.

TEACHER EDUCATION INSTITUTIONS

I conclude this testimony with some data about institutions of higher education that are preparing teachers.

Although the number of new teacher graduates decreased by nearly 60 percent from 1971 to 1981—from 324,000 to 132,000—there were 95 more institutions of higher education (IHE) conferring degrees in education 1981 than there were a decade earlier. There were 1,130 IHE's granting educating degrees in 1970–71. The number increased by 8.4 percent to 1,225 in 1980–81. The number of institutions which awarded 25 or fewer education degrees (includes bachelors, masters and doctorates) went from 200 in 1971 to 346 in 1981. Eighty-eight of the 1,130 institutions

of higher education (7.8 percent) conferred fewer than 10 education degrees at all levels in 1971. The number increased to 142 out of 1,225 (11.6 percent) in 1981.

Over half of the 1,225 institutions of higher education which conferred degrees in education in 1981 are located in seven states, six of which have experienced dramatic enrollment declines in their elementary and secondary schools in the last decade.

Teachers historically have not been a mobile lot. They tend to go to school, train to be teachers, and teach in the state where they were born. This issue, especially in light of the the fact that states which have the greatest number of institutions preparing teachers are not the states where the greatest demands are, needs serious attention.

CONCLUSIONS

The overriding conclusion I draw concerning the condition of teaching in the United States is that we are mixing apples and oranges in the current debates about teachers. On the one hand, some unions involved are calling for a $25,000-a-year starting salary for teachers, and $50,000 to $60,000 after 10 or 15 years experience. At the same time, we are introducing minimum competency tests that certify a person who can demonstrate literacy and who has taken numerous education courses to teach. Performance evaluations for teachers on the job are all but nonexistent. Teacher firings, for any reasons other than scaling back numbers, are practically unheard of. Gradations of teachers, competition within the ranks, and pay scales based on competency on the job are vehemently opposed by many who represent teachers.

The professions that command $25,000 a year in starting salaries, and $50,000 to $60,000 after 10 or 15 years, have rigorous rites of passage into them and performance standards once in the profession. Every such profession has an upward-mobility ladder based on job performance in addition to years of experience. Teaching does not. A teacher who wants to climb has to leave teaching and become a principal, guidance counselor, or some other school administrator.

Raising teacher's salaries across the board will not alone solve the current crises facing America's teaching force. Efforts need to be taken to raise the caliber of people going into teaching. I argue that raising standards and making teacher preparation more challenging will attract more academically able people into teaching. It will also raise the status of teaching and make it easier to justify higher salaries in addition to ensuring improved classroom instruction and working conditions in schools.

TABLE 26.—AVERAGE TEACHERS' SALARIES, RANKED BY STATE, IN 1982–83 CURRENT DOLLARS AND IN ADJUSTED 1972–73 DOLLARS WITH PERCENTAGE CHANGE FROM 1972–73 TO 1982–83

State	Average salary of teachers in current dollars 1982–83	Percent of increase over 1981–82	1982–83 average salary in 1972–73 dollars	Average salary of teachers in current dollars 1972–73	Percentage change in purchasing power from 1972–73 to 1982–83
Alaska	$33,953	6.4	14,762	14,678	0.6
District of Columbia	26,048	7.3	11,325	NA	NA
New York	25,100	7.1	10,913	12,400	−12.0
Hawaii	24,796	10.0	10,781	10,533	2.4
Wyoming	24,000	12.9	10,435	9,294	12.3
Michigan	23,965	7.2	10,420	11,950	−12.8
California	23,555	3.5	10,241	12,072	−15.2
Washington	23,413	2.0	10,180	10,591	−3.9
Rhode Island	23,175	7.0	10,076	10,606	−5.0
Maryland	22,786	7.9	9,907	11,159	−11.2
Illinois	22,618	7.6	9,834	11,198	−12.2
Oregon	22,334	10.0	9,710	9,600	1.2
Minnesota	22,296	9.5	9,694	10,422	−7.0
New Jersey	21,642	8.7	9,410	11,730	−19.8
Colorado	21,500	9.8	9,348	9,666	−3.3
Pennsylvania	21,000	7.8	9,130	10,389	−12.1
Nevada	20,944	4.2	9,106	10,882	−16.3
Wisconsin	20,940	8.0	9,104	10,423	−12.6
Delaware	20,665	7.1	8,985	10,594	−15.2
New Mexico	20,600	10.2	8,956	8,705	2.9
50 States and District of Columbia	20,531	7.3	8,926	10,164	−12.2

TABLE 26.—AVERAGE TEACHERS' SALARIES, RANKED BY STATE, IN 1982–83 CURRENT DOLLARS AND IN ADJUSTED 1972–73 DOLLARS WITH PERCENTAGE CHANGE FROM 1972–73 TO 1982–83—Continued

State	Average salary of teachers in current dollars 1982–83	Percent of increase over 1981–82	1982–83 average salary in 1972–73 dollars	Average salary of teachers in current dollars 1972–73	Percentage change in purchasing power from 1972–73 to 1982–83
Ohio	20,360	9.8	8,852	9,626	−8.0
Connecticut	20,300	7.	8,826	10,600	−16.7
Indiana	20,067	7.6	8,725	10,048	−13.2
Utah	19,677	8.4	8,555	9,503	0.1
Texas	19,500	10.9	8,478	2,686	−2.4
Montana	19,463	9.5	8,462	8,908	−0
Louisiana	19,265	4.1	8,376	8,837	−5.
Massachusetts	19,000	1.1	8,261	10,520	−21.5
Arizona	18,849	4.6	8,135	10,049	18.4
Iowa	18,709	4.0	8,134	9,597	−15.2
Virginia	18,707	10.0	8,123	9,513	−15.5
Florida	18,538	10.5	8,060	9,276	−13.0
Kentucky	18,400	6.4	8,000	7,794	2.6
North Dakota	18,390	4.0	7,996	8,077	−1.0
Kansas	18,299	9.5	7,956	8,507	−6.5
Oklahoma	18,110	11.7	7,874	7,802	0.9
Alabama	17,850	14.4	7,761	8,105	−4.2
North Carolina	17,836	5.2	7,755	9,162	−15.4
Missouri	17,726	8.0	7,707	9,067	−15.0
Idaho	17,549	7.0	7,630	7,657	−0.4
Tennessee	17,425	7.0	7,576	8,300	−8.7
Georgia	17,412	6.4	7,570	8,204	−7.7
Nebraska	17,412	5.1	7,570	8,730	−13.3
West Virginia	17,370	1.4	7,552	8,119	−7.0
South Carolina	16,380	8.0	7,122	8,059	−11.6
Maine	15,772	4.4	6,857	8,976	−23.4
South Dakota	15,595	6.0	6,780	7,908	−14.2
New Hampshire	15,353	4.4	6,675	9,157	−27.1
Vermont	15,338	4.2	6,669	8,887	−25.0
Arkansas	15,176	4.6	6,598	7,325	−9.9
Mississippi	14,285	1.1	6,211	6,908	−10.1

Source: Feistritzer, "The Condition of Teaching: A State-by-State Analysis," Carnegie Foundation for the Advancement of Teaching, Aug. 1983, p. 47.

TABLE 40.—STATES RANKED BY SOURCES OF REVENUE RECEIPTS—FEDERAL, STATE, AND LOCAL AND OTHER: 1982–83

Federal		State		Local and other	
Mississippi	23.0	Hawaii	89.8	New Hampshire	89.2
North Carolina	16.1	California	85.8	District of Columbia	84.5
District of Columbia	15.5	Alaska	78.3	Nebraska	65.0
Alabama	14.8	New Mexico	77.8	South Dakota	63.7
South Carolina	13.6	Washington	75.2	Wyoming	61.3
Arkansas	13.3	Kentucky	70.5	Connecticut	58.7
Tennessee	13.0	Delaware	67.5	Rhode Island	58.3
Arizona	11.4	Alabama	64.3	Vermont	57.8
Delaware	11.2	Idaho	62.6	Colorado	57.7
Kentucky	10.7	West Virginia	62.4	Wisconsin	57.2
Oklahoma	10.3	Florida	61.9	New Jersey	56.4
Georgia	10.2	North Carolina	61.5	Massachusetts	55.8
New Mexico	10.2	Nevada	60.6	Michigan	55.8
Maine	10.1	Oklahoma	60.2	Oregon	54.4

TABLE 40.—STATES RANKED BY SOURCES OF REVENUE RECEIPTS—FEDERAL, STATE, AND LOCAL AND OTHER: 1982–83—Continued

Federal		State		Local and other	
Texas	10.0	Indiana	58.6	Ohio	54.3
Hawaii	9.9	South Carolina	57.1	New York	54.1
Louisiana	9.4	Utah	56.3	Maryland	53.9
West Virginia	9.0	Louisiana	55.9	Illinois	53.4
Oregon	8.8	Georgia	55.6	Missouri	52.3
South Dakota	8.7	Arkansas	54.3	Virginia	51.8
Illinois	8.5	Mississippi	53.3	Kansas	50.8
Montana	8.5	North Dakota	51.5	Iowa	50.6
Michigan	8.1	Texas	50.6	Pennsylvania	47.4
Missouri	8.1	50 States and D.C.	50.3	Minnesota	46.3
Nevada	7.6	Maine	49.7	Montana	44.2
Pennsylvania	7.5	Minnesota	48.9	Arizona	42.9
50 States and D.C.	7.4	Montana	47.4	50 States and D.C.	42.3
Iowa	7.3	Tennessee	47.2	North Dakota	41.1
North Dakota	7.3	Arizona	45.7	Maine	40.2
Nebraska	7.1	Pennsylvania	45.2	Tennessee	39.8
Florida	7.1	Kansas	44.4	Texas	39.5
Vermont	7.0	Iowa	42.1	Utah	38.5
Idaho	6.9	New York	41.9	Indiana	35.1
Virginia	6.6	Virginia	41.6	Louisiana	34.7
Indiana	6.3	Ohio	40.7	Georgia	34.2
Maryland	5.9	Maryland	40.2	Arkansas	32.4
Alaska	5.7	New Jersey	40.0	Nevada	31.8
Colorado	5.4	Missouri	39.6	Florida	31.0
Wisconsin	5.4	Massachusetts	39.4	Idaho	30.4
Washington	5.4	Illinois	38.0	Oklahoma	29.5
California	5.3	Wisconsin	37.4	South Carolina	29.3
Utah	5.2	Rhode Island	37.0	West Virginia	28.5
Ohio	5.0	Colorado	36.9	Mississippi	23.7
Connecticut	4.9	Oregon	36.8	North Carolina	22.4
Kansas	4.8	Connecticut	36.4	Delaware	21.2
Massachusetts	4.8	Michigan	36.1	Alabama	21.0
Minnesota	4.7	Vermont	35.2	Washington	19.4
Rhode Island	4.7	Wyoming	34.7	Kentucky	18.7
New York	4.0	Nebraska	27.9	Alaska	16.0
Wyoming	4.0	South Dakota	27.6	New Mexico	12.0
New Hampshire	3.9	New Hampshire	6.9	California	8.9
New Jersey	3.5	District of Columbia	NA	Hawaii	0.3

Source: Feistritzer, "The Condition of Teaching: A State-by-State Analysis," Carnegie Foundation for the Advancement of Teaching, Aug. 1983, p. 72.

TABLE 47.—EARNED BACHELOR'S DEGREES CONFERRED IN EDUCATION, BY LEVEL AND SPECIALTY: ACADEMIC YEAR 1970–71 AND 1980–81

Specialty	1971	1981	Percentage change
Education, total	176,614	108,309	−38.7
Education, general	2,026	2,777	37.1
Elementary eduction, general	90,432	38,524	−57.4
Secondary education, general	3,549	2,973	−16.2
Pre-elementary education	3,405	4,807	41.2
Junior high school education	721	248	−65.6
Higher education, general	6	5	−16.7
Junior and community college education	1	2	100.0
Adult and continuing education	12	25	108.3
Special education, all specialties	8,360	13,950	66.9
Special education, general	2,320	8,843	281.2
Administration of special education	0	20	

TABLE 47.—EARNED BACHELOR'S DEGREES CONFERRED IN EDUCATION, BY LEVEL AND SPECIALTY: ACADEMIC YEAR 1970–71 AND 1980–81—Continued

Specialty	1971	1981	Percentage change
Education of the mentally retarded	2,640	1,660	−37.1
Education of the gifted	12	28	133.3
Education of the deaf	239	349	46.0
Education of the culturally disadvantaged	3	22	633.3
Education of the visually handicapped	78	93	19.2
Speech correction	2,358	1,197	−49.2
Education of the emotionally disturbed	347	471	35.7
Remedial education	0	17	
Special Learning disabilities	125	846	576.8
Education of the physically handicapped	149	137	−8.1
Education of the multiple handicapped	63	104	65.1
Education of exceptional children, not classified above	76	163	526.9
Social foundations	180	32	−82.2
Educational psychology	307	235	−23.5
Education statistics and research	3	0	
Educational testing, evaluation, and measurement	0	50	
Student personnel	7	299	417.4
Educational administration	5	27	440.0
Educational supervision	0	46	
Curriculum and instruction	296	318	7.4
Reading education	9	370	401.1
Art education	5,661	2,392	−57.7
Music education	7,274	5,332	−26.6
Mathematics education	2,217	798	−64.0
Science education	891	597	−33.0
Physical education	24,732	19,095	−22.8
Driver and safety education	132	109	−17.4
Health education	1,089	2,259	107.4
Business, commerce, and distributive education	8,550	3,405	−60.2
Industrial arts, vocational and technical education	7,071	5,772	−18.4
Agricultural education	1,398	955	−31.7
Home economics education	6,449	1,767	−72.6
Nursing education	603	171	2.3
Teaching English as a foreign language	43	44	2.3
Other	1,195	925	−22.6

Source: Feistritzer, "The Condition of Teaching: A State-by-State Analysis," Carnegie Foundation for the Advancement of Teaching, Aug. 1983, p. 82.

TABLE 54.—COMPARISION OF AVERAGE SAT SCORES OF COLLEGE BOUND SENIORS IN EACH STATE WITH THOSE OF COLLEGE BOUND SENIORS INTENDING TO MAJOR IN EDUCATION: 1982

State	Average SAT scores		Those intending to major in education		Difference between State averages and those intending to major in education	
	Verbal	Math	Verbal	Math	Verbal	Math
United States	426	467	394	419	32	48
Alabama	463	501	400	428	63	73
Alaska	446	477	413	437	33	40
Arizona	470	511	440	449	30	62
Arkansas	480	519	420	445	60	74
California	425	474	399	424	26	50
Colorado	468	515	433	460	35	55
Connecticut	432	464	395	408	37	56
Delaware	432	465	389	409	43	56
District of Columbia	398	423	348	367	50	56
Florida	426	463	394	414	32	49
Georgia	394	429	366	393	28	36

TABLE 54 — COMPARISION OF AVERAGE SAT SCORES OF COLLEGE BOUND SENIORS IN EACH STATE WITH THOSE OF COLLEGE BOUND SENIORS INTENDING TO MAJOR IN EDUCATION: 1982—Continued

State	Average SAT scores		Those intending to major in education		Difference between State averages and those intending to major in education	
	Verbal	Math	Verbal	Math	Verbal	Math
Hawaii	392	465	365	418	27	47
Idaho	482	513	426	450	56	63
Illinois	462	[illegible]	423	455	39	60
Indiana	407	453	386	419	21	34
Iowa	516	572	473	478	43	94
Kansas	500	545	455	471	45	74
Kentucky	475	510	444	450	31	60
Louisiana	470	505	432	446	38	59
Maine	427	463	389	417	38	46
Maryland	425	464	394	415	31	49
Massachusetts	425	463	388	407	37	56
Michigan	459	514	423	451	36	63
Minnesota	485	543	443	475	42	68
Mississippi	479	509	404	406	75	103
Missouri	465	510	426	471	39	57
Montana	487	546	431	476	56	30
Nebraska	493	552	444	489	49	63
Nevada	436	481	398	420	38	61
New Hampshire	443	482	408	424	35	58
New Jersey	416	453	384	405	32	48
New Mexico	480	517	439	445	41	72
New York	429	467	405	433	24	34
North Carolina	396	431	365	393	31	38
North Dakota	515	561	NA	NA	NA	NA
Ohio	456	502	423	454	33	48
Oklahoma	483	518	442	448	41	70
Oregon	435	473	401	420	34	53
Pennsylvania	424	461	398	422	26	39
Rhode Island	420	457	393	415	27	42
South Carolina	378	412	356	384	22	28
South Dakota	522	553	490	531	32	22
Tennessee	480	519	446	475	34	44
Texas	415	453	385	406	30	47
Utah	494	528	430	463	64	65
Vermont	433	471	399	430	34	41
Virginia	426	462	388	408	38	54
Washington	468	514	431	454	37	60
West Virginia	462	506	397	411	65	95
Wisconsin	476	535	430	471	46	64
Wyoming	484	533	402	453	82	80

Source: Feistritzer, "The Condition of Teaching: A State-by-State Analysis," Carnegie Foundation for the Advancement of Teaching, Aug. 1983, p. 3.

State	Number IHE's conferring education degrees			Number bachelor's degrees conferred in education			Total number of bachelor's degrees conferred [illegible]		
	1971	1981	Change	1971	1981	Percent change	1971	1981	Percent change
United States	1,130	1,225	+95	176,467	108,254	−38.6	839,730	935,140	+11.4
Alabama	27	28	+1	2,909	2,711	−6.8	13,000	16,539	+27.2
Alaska	3	5	+2	92	73	−20.6	369	465	+26.0
Arizona	4	7	+3	2,050	1,615	−21.2	8,261	10,826	+31.0
Arkansas	17	17	.....	2,299	1,683	−26.5	7,284	6,955	−4.5
California	54	64	+10	3,454	3,661	+6.0	73,844	81,848	+10.8

State	Number IHE's conferring education degrees			Number bachelor's degrees conferred in education			Total number of bachelor's degrees conferred by the IHE's		
	1971	1981	Change	1971	1981	Percent change	1971	1981	Percent change
Colorado	12	18	+6	2,435	1,519	−37.6	12,401	14,677	+18.4
Connecticut	12	13	+1	2,475	1,208	−51.2	11,499	13,312	+15.8
Delaware	2	2	.....	367	299	−18.5	1,602	3,194	+99.4
District of Columbia	10	9	−1	583	288	−102.4	5,997	6,807	+13.5
Florida	21	31	+10	4,940	3,795	−23.2	20,933	29,988	+43.3
Georgia	30	34	+4	3,076	2,049	−50.1	15,117	17,014	+12.6
Hawaii	4	2	−2	529	114	−364.0	3,051	3,212	+5.3
Idaho	6	6	.....	1,016	463	−119.4	2,744	2,759	+0.6
Illinois	51	57	+6	10,399	4,866	−113.7	41,861	44,470	+6.2
Indiana	39	37	−2	5,820	2,916	−99.6	23,642	24,834	+5.0
Iowa	27	28	+1	3,657	2,069	−76.8	14,784	14,441	−2.3
Kansas	24	23	−1	3,075	1,863	−39.4	12,360	11,672	−5.6
Kentucky	21	22	+1	3,879	2,053	−47.1	12,459	11,509	−7.6
Louisiana	20	21	+1	3,429	1,943	−43.3	14,051	14,821	+5.5
Maine	11	11	.....	1,506	688	−54.3	4,482	4,817	+7.5
Maryland	20	20	.....	2,383	1,263	−47.0	12,624	15,091	+25.8
Massachusetts	40	41	+1	5,190	3,192	−38.5	30,632	38,972	+26.6
Michigan	25	31	+6	6,825	3,829	−43.9	36,792	38,647	+5.0
Minnesota	26	27	+1	5,482	2,551	−53.5	18,674	19,392	+4.0
Mississippi	17	15	−2	3,183	2,001	−37.1	8,816	8,982	+1.9
Missouri	33	37	+4	4,819	3,087	−35.9	19,533	22,041	+12.8
Montana	8	8	.....	1,266	664	−47.6	3,991	3,815	−4.4
Nebraska	17	16	−1	2,643	1,597	−39.6	9,876	7,404	−25.0
Nevada	2	2	.....	131	175	+25.1	1,253	1,477	+17.9
New Hampshire	9	8	−1	690	464	−48.7	4,328	6,025	+39.2
New Jersey	21	23	+2	6,313	2,397	−163.4	19,690	24,474	+24.3
New Mexico	9	9	.....	1,018	744	−36.8	4,327	4,543	+5.0
New York	81	86	+5	10,263	5,573	−84.2	72,235	83,777	+16.0
North Carolina	40	43	+3	4,756	3,329	−42.9	19,847	23,712	+19.5
North Dakota	8	8	.....	1,388	778	−78.4	4,017	3,795	−5.5
Ohio	50	49	−1	10,722	5,384	−99.1	44,325	41,306	−6.8
Oklahoma	19	20	+1	3,816	2,700	−29.2	12,488	12,818	−2.6
Oregon	16	17	+1	2,288	1,320	−73.3	10,069	9,783	−2.8
Pennsylvania	67	72	+5	11,234	5,896	−90.5	50,074	54,446	+8.7
Rhode Island	8	9	+1	1,018	433	−57.5	5,107	7,263	+42.2
South Carolina	22	26	+4	1,650	1,972	+19.5	8,039	11,358	+41.3
South Dakota	12	13	+1	1,710	751	−56.1	4,796	3,868	−19.3
Tennessee	32	33	+1	4,052	2,742	−32.3	16,575	17,409	+5.0
Texas	53	66	+13	10,135	9,021	−11.0	43,329	53,589	+23.7
Utah	6	7	+1	2,026	1,464	−27.7	9,386	9,336	−0.3
Vermont	8	12	+4	434	496	+14.3	3,045	3,971	+30.4
Virginia	25	30	+5	2,730	2,509	−8.0	14,762	22,078	+49.6
Washington	13	14	+1	2,468	1,662	−32.7	16,556	15,648	−0.6
West Virginia	16	17	+1	2,220	1,351	−39.1	7,901	7,720	−2.3
Wisconsin	31	30	−1	5,346	2,805	−47.5	22,700	22,026	−3.0
Wyoming	1	1	.....	284	222	−27.9	1,315	1,320	+0.4

Source: Feistritzer Publications. Basic data from the National Center for Education Statistics.

PERCENTAGE CHANGES FROM 1972–73 TO 1982–83 FOR PUBLIC ELEMENTARY/SECONDARY SCHOOLS, BY STATE

State	Enrollment	Number E/S teachers	((In real dollars)			Fiscal effort for education [1]
			Per Pupil expenditures	Average salary of teachers	Per capita income	
United States	−14.0	1.4	22.5	−12.2	6.5	−17.6
Alabama	−7.6	15.0	12.2	−4.2	9.0	−14.7
Alaska	2.4	35.9	82.6	0.6	25.1	11.8
Arizona	4.4	34.8	16.3	−18.4	3.5	−17.3

PERCENTAGE CHANGES FROM 1972-73 TO 1982-83 FOR PUBLIC ELEMENTARY/SECONDARY SCHOOLS, BY STATE—Continued

State	Enrollment	Number E/S teachers	(In real dollars) Per Pupil expenditures	Average salary of teachers	Per capita income	Fiscal effort for education [1]
Arkansas	−4.5	14.0	38.3	−9.9	10.9	7.7
California	−12.0	−9.1	3.1	−15.2	7.7	−47.3
Colorado	−5.1	16.6	29.5	−3.3	11.9	−14.3
Connecticut	−25.0	−7.2	31.3	−16.7	8.9	−25.9
Delaware	−31.0	−14.1	38.9	−15.2	−0.2	−23.7
District of Columbia	−37.4	−24.8	21.1	N/A	N/A	−34.8
Florida	−10.4	22.8	39.0	−13.0	6.6	−12.8
Georgia	−3.6	16.1	15.6	−7.7	5.2	7.9
Hawaii	−9.0	16.6	30.4	2.4	−1.3	−23.0
Idaho	11.0	24.8	21.5	−0.4	3.1	4.3
Illinois	−20.3	−5.1	24.2	−12.2	3.0	−23.0
Indiana	−17.6	−3.1	32.2	−13.2	1.5	−11.8
Iowa	−23.2	0.2	29.4	−15.2	3.7	−14.8
Kansas	−17.4	2.1	44.2	−6.5	9.4	2.2
Kentucky	−8.8	2.5	36.1	2.6	7.4	7.5
Louisiana	−8.5	6.2	18.5	−5.2	25.7	−25.0
Maine	−14.3	9.2	36.5	−23.4	5.9	−5.9
Maryland	−24.1	−10.8	27.6	−11.2	7.0	−30.6
Massachusetts	−23.0	−9.6	16.7	−21.5	4.8	−43.5
Michigan	−19.7	−14.4	36.8	−12.8	0.2	−3.7
Minnesota	−21.0	−10.6	18.4	−7.0	8.7	−27.5
Mississippi	−12.4	6.0	29.7	−10.1	10.3	−7.3
Missouri	−21.7	3.6	26.7	−15.0	4.3	−17.0
Montana	−11.7	4.8	37.4	−5.0	3.6	11.7
Nebraska	−19.6	−7.6	27.4	−13.3	2.0	−5.0
Nevada	14.7	37.5	4.8	−16.3	−0.8	−27.3
New Hampshire	−4.0	21.6	15.6	−27.1	9.4	−17.4
New Jersey	−22.8	−5.5	41.0	−19.8	5.3	−9.4
New Mexico	−4.1	16.9	47.5	2.9	8.9	8.9
New York	−22.7	−12.8	13.4	−12.0	1.9	−20.3
North Carolina	−4.7	12.8	43.1	−15.4	3.6	−8.9
North Dakota	−17.6	4.7	56.1	−1.0	7.4	0
Ohio	−23.4	−9.2	27.9	−8.0	3.6	−6.5
Oklahoma	−4.3	20.2	58.1	0.9	24.2	−2.1
Oregon	−6.3	10.7	56.1	1.2	4.0	−1.8
Pennsylvania	−24.6	8.0	22.7	−12.1	6.3	−13.5
Rhode Island	−27.5	−7.7	39.3	−5.0	5.3	−4.3
South Carolina	−3.1	19.2	9.8	−11.6	5.5	−6.4
South Dakota	−23.8	−2.3	24.3	−14.2	6.2	−2.0
Tennessee	−6.3	5.6	24.6	−8.7	5.0	−4.9
Texas	5.3	27.8	19.0	−2.4	23.7	−8.5
Utah	20.7	20.8	21.6	0.6	1.8	5.3
Vermont	−14.0	9.3	−0.9	−25.0	4.1	−24.2
Virginia	−8.8	6.1	26.6	−15.5	9.4	−10.9
Washington	−6.6	5.4	34.5	−3.9	11.8	−23.2
West Virginia	−8.5	23.5	32.9	−7.0	7.6	13.3
Wisconsin	−21.1	2.1	31.1	−12.6	5.8	−15.5
Wyoming	18.9	62.4	40.2	12.3	18.4	4.5

[1] Fiscal effort—State and local revenues for education as a percentage of personal income.

Source: Basic data from Feistritzer, "The Condition of Teaching: A State-by-State Analysis, The Carnegie Foundation for the Advancement of Teaching, August 1983.

Mr. SIMON. Next is Dr. David Imig, executive director of the American Association of Colleges for Teacher Education.

STATEMENT OF DAVID G. IMIG, EXECUTIVE DIRECTOR, AMERICAN ASSOCIATION OF COLLEGES FOR TEACHER EDUCATION

Mr. IMIG. Thank you, Mr. Simon.

I am pleased to have the opportunity to appear before you to respond to your request for information regarding the Nation's schools, colleges, and departments of education.

I am here representing the American Association of Colleges for Teacher Education, which includes some 750 schools, colleges, and departments of education located in the Nation's colleges and universities. Annually we collect data and report that data to our members. I will be going over that data this morning.

In your letter of November 7, Mr. Simon, you asked for data regarding student population, faculty, curriculum revision, standards, funding of education departments, and examples of innovative practices.

In my allotted 10 minutes I will attempt to respond to those requests.

The colleges and universities that prepare the Nation's teachers, principals, counselors, and other school personnel are highly diversified, as both Dr. Eldridge and Dr. Feistritzer have said. In today's reform climate, many people associated schools of education with low quality, resistance to change, and lack of relevance between preparation and practice.

In the few minutes I have this morning, I would like to try to correct some of these misconceptions.

As the training arm of the teaching profession, teacher education is charged with developing the knowledge and skill foundations for practice, preparing personnel for entry to the profession, and contributing to the ongoing development of practicing professionals.

The first two of these functions are shared responsibilities with all of higher education and the third is a shared responsibility with local staff development programs.

Today, the initial or basic preparation of school personnel takes place in some 1,206 institutions of higher education, which range in size, program complexity, and resource commitment from Southern Illinois University to Greenville College.

Mr. Chairman, you have a microcosm of the range of institutions and the kinds of commitments within your own district.

More than 70 percent of all colleges and universities in this country provide teacher education programs, although the largest share of prospective teachers are trained in public master-level State colleges and universities that were at one time normal schools.

I think that it is fair to characterize that population by access and availability: a large number of institutions with significant geographic availability and relatively easy entry for students in the immediate environment.

There is data in the prepared testimony that show differences in programs within these institutions and some of the recent and important changes at both the University of Michigan and the University of California at Berkeley, to point out some of the differences and ongoing changes in programs.

But I would prefer to move on quickly and talk about some of the characteristics of faculty within these institutions.

At the present time, one of the major problems confronting schools of education are highly tenured faculties of older professors and faculty members.

In the land grant institutions at the present time 67 percent of faculty are tenured, and in the average private liberal arts institution, faculty tenure is at a rate of about 60 percent. The average or mean age of that faculty is now in their late fifties, and promoting change within that kind of a faculty is somewhat difficult.

However, there are a couple of important characteristics about that faculty that I would like to emphasize. First of all, 85 percent of them hold doctorates.

Second, more than 90 percent have had significant work experience in elementary and secondary schools with a mean of such experience at the elementary level of 12 years and 8 years at the secondary school.

Some people have asked, "Where have the master teachers gone?" At least some of those master teachers have moved on into colleges and universities and more specifically into teacher training programs.

There is an ongoing study at the University of Vermont which shows that faculty and education generally are as productive, based on teaching mode and numbers of published articles, as are their colleagues across campus, that they are just as campus-bound as other faculties, and that they place primary emphasis upon teaching assignments.

Finding ways to provide faculty development opportunities for these individuals we consider to be extremely important.

Dr. Feistritzer has talked at some length this morning about students and teacher education programs. Contrary to many assumptions, there really isn't much data on the students actually enrolled in teacher education programs. Virtually the only indicator that has been used as a single set of data are drawn from high school juniors and seniors who mark one item on the scholastic aptitude test indicating a preference for education as an undergraduate major.

The one and probably most important exception to this is the data that Dr. Schlechty has drawn that he will be able to present to you in a few minutes.

Given the time constraints this morning, I think all four of us also are ignoring the whole debate on the appropriateness of such measures for predicting and/or admission purposes.

But let me move on to say our data show college students enrolled in education programs have combined SAT scores 60 points higher than those reported for high school students indicating education as a prospective college major. And there are other indicators that the quality of prospective teachers is still higher than is being reported. For example, as Diane Ravitch has noted in her recent article in the New Republic, secondary education candidates are not enrolled in schools of education. That population of students, generally considered to be the best and brightest in education, are not even counted when we talk about various kinds of analyses of the quality of students.

However, there are some very disturbing signs that overall the quality of graduates had declined. Last evening I spent a consider-

able length of time on the phone with both the Education Testing Service and the College Board looking at the NTE commons examination. That is the commons examination which measures general knowledge and basic skills.

We were looking at the last 5 years for which that set of examinations has been used. And what we are seeing is a significant decline in test scores of the 57,000 to 68,000 cases of students taking that test.

If such output measures are declining—measures of subject matter content, incidentally, over which education faculty have very little control—then indeed we must address the causes for such decline. Whether it is attributable to changes in career patterns by bright and talented women and minorities or other factors remains uncertain.

But finding and identifying ways to attract the best possible students into teacher education is imperative. Schools of education have had to set up remediation efforts to alleviate the basic skills deficiencies undergraduate students bring with them when they enter a teacher education program, a response that is currently widespread in the profession.

Institutions in your district and in other districts represented here this morning are addressing that problem through remediation programs housed within schools of education.

However, insufficient pre-professional preparation in screening of undergraduate general studies programs must be a priority as we begin to look to the future.

At the same time, we need to be cautious that our scrutiny does not discourage some very bright and talented people who are already enrolled in teacher education programs from completing the professional preparation and entering teaching. That is a concern that many of my colleagues share as they conduct programs this fall.

Finally, for those who seek reforms in the preparation of teachers, an important fact to bear in mind is that students presently take most of their courses outside the undergraduate education department.

As Dr. Eldridge said, would-be high school teachers take only about 24 percent of the courses in education and would-be elementary teachers take only about 35 percent of their courses, including student teaching.

Consequently, if the reformers believe there are academic deficiencies, the fault lies to a considerable extent elsewhere within the university.

Parallel to the concern about the intellectual inadequacy of the candidates is one regarding the relevance of program preparation to actual school teaching. Mr. Simon, you have cited that as a concern of yours in the discussions around the Merit Pay Task Force.

When practicing teachers were recently asked by the National Center for Education Statistics to assess the relevancy of their undergraduate preparation, elementary teachers, that is, those who have a slightly larger percentage of education courses, were the most likely to regard their work as closely related to their college major. Indeed, over 90 percent of primary or elementary teachers see their preparation program as closely work-related.

In conclusion, what I would like to do is very quickly note six major changes currently under way in schools of education. While many of these preceded the current reform efforts, they have been reinforced and emphasized as a result of that movement.

The first of these has been an emphasis in an effort to raise the entrance requirements into teacher education, that is, into teacher education after 2 years of successful completion of the basic or general studies program.

The National Center for Education Statistics has reported that 76 percent of the institutions preparing teachers have raised their entrance requirements into teacher education. Whereas the average GPA for admission is 2.5 now for schools of education on a 4.0 scale, after 2 years of basic general studies in the university, we have found that the actual mean GPA for students admitted into education is 2.6, or a B-minus average.

A second trend is continuous assessment. Schools of education have taken on the task of applying basic skills examinations to all candidates in the programs and then developing a portfolio to monitor and track students across their program, and finally to use a series of exit examinations.

Third, is the extensive expansion of the clinical or school-based component in teacher education. Since 1968, the number of hours students actually spend in real school settings has increased from 280 clock hours to 419; students in education are having more and more opportunity to work with practicing teachers and young persons.

Fourth, is that more programs are responding more specifically to compensatory and exceptional needs of children.

Fifth, there is a trend around the significant infusion into the curriculum of the research findings that the National Institute of Education and other agencies have stimulated over the past years. That whole body of research findings is finding its way very significantly into the programs within schools of education.

Finally, a sixth trend is that schools of education have responded and are responding to the efforts to accommodate educational technology and computers. More than 20 percent of our institutions already require such courses and another 35 percent are currently providing elective courses in technology and computer literacy.

It is my assertion that schools of education are implementing reform efforts to redesign their programs as well as to restore the confidence of the public. To be successful in these efforts we do need the help, cooperation, and support of State and Federal policymakers.

I thank you, Mr. Chairman, for the opportunity to appear before you and your committee this morning, and I will be pleased to respond to questions following Dr. Schlechty.

Mr. SIMON. Thank you very much.

[The prepared statement of Dr. David G. Imig follows:]

PREPARED STATEMENT OF DR. DAVID G. IMIG, EXECUTIVE DIRECTOR, AMERICAN ASSOCIATION OF COLLEGES FOR TEACHER EDUCATION

Mr. Simon and members of the Subcommittee on Postsecondary Education, I am pleased to have the opportunity to appear before you to respond to your request for information regarding the nation's schools, colleges, and departments of education. I

am here representing the American Association of Colleges for Teacher Education. AACTE is a national, voluntary association of colleges and universities with undergraduate or graduate level teacher education programs. Collectively our member institutions prepare over 80 percent of the education personnel graduated annually. In your letter of November 7, 1983, you asked for data regarding student population, faculty, curriculum revision, standards, funding of education departments, and examples of innovative approaches. I am pleased to attempt to respond to those requests. I would ask that my extended statement be placed in the record. I will summarize my comments and respond to your questions.

The colleges and universities that prepare the nation's teachers, principals, counselors and other school personnel are highly diversified. In today's reform climate, many people associate schools of education with low quality, resistance to change, and lack of relevance between preparation and practice. I am pleased to be given the opportunity to correct these misconceptions. As the training arm of the teaching profession, teacher education is charged with developing the knowledge and skill foundations for practice, preparing personnel for entry to the profession, and contributing to the ongoing development of practicing professionals. The first two of these functions are integral parts of higher education. The third is shared with local staff development programs. The task of enhancing all three dimensions: preservice, inservice, and in building a more integrated system for delivery, represents one of the greatest challenges for the future and potentially one of the most important responses to the call for school reform.

Today the initial or basic preparation of school personnel takes place in some 1206 institutions of higher education, which range in size, program complexity, and resource commitment from Southern Illinois University to Greenville College. More than 70 percent of all colleges and universities in this country provide teacher education programs, although the largest share of prospective teachers is trained in public master-level state colleges and universities that were at one time normal schools.

A representative sample of the 1206 higher education institutions offering education programs indicates that 98 percent offer at least one bachelor's level program, 66 percent offer master level programs, 36 percent offer six-year programs, and 21 percent offer doctoral programs. Much has been made of the downsizing of institutions, particularly at the University of Michigan, but I believe that it is equally important to highlight the significant and important refocusing effort at the University of California at Berkeley and of the recent commitment by presidents of several prestigious colleges and universities to the enhancement of their teacher preparation programs.

Although a major study is underway at the University of Vermont that will provide us with considerable anecdotal data on characteristics of education faculty, the American Association of Colleges for Teacher Education Annual Reports to the Profession, which draw upon a representative sample of the approximately 40,000 persons who teach in education programs give us a profile of institutions and their faculty. Let me preface my remarks about faculty composition by noting that we divide the universe of institutions differently than the National Center for Education Statistics. I will speak of land grant, state college, private liberal arts, and predominately, historically black institutions, whereas the Center speaks of doctoral, comprehensive, baccalaureate and speciality institutions. This is not a major problem; it simply points to one of the difficulties in computing data.

The average land grant institution has a faculty numbering 88 members (of whom 68 percent are make, 90 percent are white, and 67 percent tenured); the average private liberal arts institution has a faculty numbering 6.5 members (of whom 53 percent are female, 100 percent are white and 58 percent hold tenure). State colleges, private universities and predominately/historically black institutions have faculty profiles that range between these two extremes. I would like to stress a couple of things about these faculty. First, that 85 percent of them hold doctorates, and second, that more than 90 percent have had significant work experience in elementary and secondary schools with a mean of such service at the elementary level of twelve years and eight years at the secondary level. The Vermont study is showing that faculty in education generally are as productive, based on teaching load and numbers of published articles, as their colleagues across campus; that they are just as campus-bound as those faculties; and that they place primary emphasis on their teaching assignments. Finding ways to provide faculty development opportunities for these individuals is important.

Let me move on to an overview of students in teacher education programs. It is amazing to me the extent to which our undergraduate student population in education has been negatively characterized by newspaper columnists and others, based

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largely on a single set of flawed data. Contrary to many assumptions, there really isn't much data on the students actually enrolled in teacher education programs. Virtually the only indicator that has been used is a single set of data drawn from high school juniors and seniors who mark one item on the Scholastic Aptitude Test indicating a preference for education as an undergraduate major. The analyses that have been provided do little to determine the profile of students who, two or three years later, are actually admitted into an education program.

Our data show students enrolled in education programs have combined SAT scores sixty points higher than those reported for students indicating education as a prospective college major—and there are other indicators that the quality of prospective teachers is still higher than is being reported. For example, secondary education candidates are many times not counted in these analyses. However, there are also some very disturbing signs that overall the quality of graduates has declined. If one uses data from the NTE Commons Examination (which measures general knowledge and basic skills), over the last five years there has been what NTE test analysts call a significant decline in test scores of the 57,000 to 68,000 "cases" taking the test. Data from selected state competency examinations reinforce this conclusion. If such output measures are declining—measures of subject matter content over which education faculty have little control—then we must address the causes for such decline. Whether it is attributable to changes in career patterns by bright and talented women and minorities or to other factors remains uncertain. Finding and identifying ways to attract the best possible students into teacher education is imperative. That schools of education have had to set up remediation efforts to alleviate the basic skills deficiencies undergraduate students bring with them when they enter a teacher education program is a response by the profession to this problem; however, it does not address the source of the problem: insufficient preprofessional preparation in undergraduate general studies programs. It is important that federal and state policy makers as well as education professionals have accurate national data on academic attainments and characteristics of those who choose to enter teaching.

At the same time we need to be cautious that our scrutiny does not discourage some very bright and talented students who are already enrolled in education programs from completing their professional preparation and entering teaching. We need to acknowledge the many fine attributes of students who are preparing for a career in education. They are committed and dedicated and they have chosen to enter teaching because of a desire to work with young people. They see teaching as an opportunity to render an important service while staying close to their subject fields.

An interesting characteristic about past teacher education students is that their job placement success has been greater than that of any other undergraduate population, and has been such throughout the 1970s during a period of enormous surplus of teachers and an underdemand for them in classrooms. Obviously, someone in society is finding teachers, as presently prepared, to be good employees and attractive assets in both public and private sector roles other than as classroom teachers.

Finally, for those who seek reforms in the preparation of teachers, an important fact to bear in mind is that students presently take most of their courses outside the undergraduate education department. Would-be high school teachers take only about 24 percent of their courses in education and would-be elementary teachers take only about 35 percent of their courses (including student teaching) in education. Consequently, if the reformers believe there are academic deficiencies, the fault lies to a considerable extent with the arts and science faculties. Parallel to the concern about the intellectual inadequacy of the candidates is one regarding the relevance of program preparation to actual school teaching. When practicing teachers were recently asked by the National Center for Education Statistics to assess the relevency of their undergraduate preparation, elementary teachers, that is, those who have a slightly larger percentage of education courses, were the most likely to regard their work as closely related to their college major. Over 90 percent of primary or elementary teachers see their preparation program as closely work-related.

At this point, it is important to note six major changes currently underway in schools of education. While many of these preceded the current reform efforts, they have been reinforced and emphasized as a result of this movement. The first of there is that the entrance requirements into teachers education have been raised. The National Center for Education Statistics has reported that 76 percent of institutions preparing teachers have raised their entrance requirements into teacher education. Whereas the average GPA for admission is 2.5 on a 4.0 grade scale, after two years of basic general studies in the university, the actual mean GPA for students admitted into education is 2.62. A second trend is that of continuous assessment:

using a basic skills examination between the sophomore and junior year as a requirement for admission into the program, developing a portfolio to monitor and track each student in the program, and finally using a series of exit examinations. Third, is the extensive expansion of the school-based component in teacher education. Since 1968, the number of hours students spend in schools has increased from 280 to 419; students in education are having more and more opportunity to work with practicing teachers and young persons in actual elementary and secondary school settings. A component of this trend is that a variety of sites are being used for these kinds of experiences. A fourth trend is more programs that respond more specifically to the compensatory and exceptional needs of children. A fifth trend has been the significant infusion into the curriculum of inquiry and research finding that the National Institute of Education and other agencies have stimulated over the past ten years. Research on effective teaching, classroom management, effective schools, and other aspects of teaching and learning are being added to programs. NIE has shown significant leadership in facilitating this trend. Finally, the sixth trend is that schools of education have responded to and are making dramatic strides in accommodating educational technology. Twenty percent of the institutions already require courses and another 35 percent are providing elective courses in technology and computer literacy.

Today, schools, colleges, and departments of education are confronted by a host of conditions that limit their ability for further change. These include (1) The enrollment rollercoaster of the current decade which has caused significant reductions in the size of school of education faculties and a pronounced decrease in the feeling of security among faculty in the academy; (2) Concerns over the quality of the applicant pool that have further eroded the status of campus based preparation programs; (3) The underfunding of teacher education programs and the present use of student credit measures for the distribution of resources within the academy which act as a disincentive for service off-campus and erode the capacity of schools of education to aggressively deal with the question of admission and standards; (4) The accountability of teacher education to a myriad of masters—from the board of regents to the state board of education, to a host of academic committees and officers within the university to professional boards, accreditation agencies and employing authorities beyond the university—has resulted in deans of education being accountable to everyone; (5) While SCDEs are prepared to enact significant changes in the teacher preparation programs, they have almost no control over the political, social and economic forces that are determining who will apply to become teachers, the content and nature of all but one quarter of the university program, or the conditions candidates will face upon leaving the institutions.

The above frustrations notwithstanding, it is my assertion that schools of education are implementing reform efforts to redesign as well as restore the confidence of the public. To be successful in these efforts we need the help and support of state and federal policy-makers. First by enhancing the quality of the data base, specifically by giving priority attention to the NCES commitment to and capability for gathering and supplying data on teacher supply and demand, profiles of students, and other information pertient to planning and budgeting. Second, by attracting more qualified students into teacher education, possibly through a series of fellowship or loan programs. Third, by allocating to school of education faculty opportunities to compete for sabbatical fellowships, NEH grants, & FIPSE opportunities. Fourth, by assisting states, local education agencies and institutions of higher education to look at a variety of recruitment, placement, and evaluation strategies for teaching candidates. Finally, by facilitating and encouraging university-school partnerships toward the end of building stronger relationships between those two parts of the education continuum.

I thank you, Mr. Chairman, for this opportunity to appear before your committee, and I will be pleased to respond to questions and/or concerns.

An Examination of the Teacher Education Scope: An Overview of the Structure and Form of Teacher Education

Teacher Education Profile—Preservice Education

The task of preparing teachers for today's schools while maintaining and upgrading the knowledge and skills of practicing teachers is an enormous undertaking. As the training arm of the teaching profession, teacher education is charged with developing the knowledge and skills bases for practice, with preparing personnel for entry to the profession, and with contributing to the on-going development of practicing professionals. The first two of these functions are integral parts of higher edu-

cation. The third is shared with local staff development programs. The tasks of redefining the function and form of teacher education—both preservice and inservice—and of building a more integrated system for delivery represent one of the greatest challenges for the future.

Function and form.—Today, the initial or basic preparation of teachers, counselors, principals, and school administrators takes place in some 1,340 institutions of higher education (IHEs), which range from Stanford University in California to Ball State University in Indiana, and from Lesley College in Massachusetts to Bethune-Cookman College in Florida. More than 70 percent of all IHEs provide teacher education programs, although the largest share of prospective teachers (45 percent) are trained in public, masters-level state colleges and universities that were at one time normal schools.

A representative sample of the 1,340 higher education institutions offering education programs indicated that all offer at least one bachelor's level program; 66 percent operate master's level programs; 36 percent offer sixth-year programs; and 21 percent offer doctoral programs (Heald, 1982).

Despite severe economic pressures confronting institutions of higher education, a pervasive resiliency characterizes the enterprise. Only a few institutions, among them Duke and Notre Dame Universities, Trinity College, and the University of Bridgeport, have closed their education programs. The teacher education programs at Oberlin, Mount Holyoke, and Connecticut Wesleyan have also been recently discontinued (Stroup, 1982). In contrast, the Lutheran Church has added teacher education to two of its institutions in the past two years, and the University of California at Berkeley recently made an important statement regarding the retention of its program (Heyman, 1981).

Faculty overview.—Although a major study of education faculty is underway at the University of Vermont, (Ducharme and Agne, 1982) the most recent data available were produced by Joyce, Yarger, and Howey (Joyce, 1977). They reported that 41,000 persons teach in these programs, collectively known as schools, colleges, and departments of education (SCDEs). Their data showed that 85 percent of faculty held doctorates; 60 percent were tenured; and more than 90 percent had significant work experience in elementary and secondary schools (with a mean of eight years of such service). Fuller and Bown add that teacher educators share, by and large, humble social-class origins and low status in comparison with their academic colleagues. They more often hold paying jobs while working for a degree, enter the faculty later, perhaps with the Ed.D., and so are less likely to have acquired the scholarly credentials valued by academicians (Fuller, 1975).

In a later study, size of faculties varied greatly, ranging from 1 to 480 full-time equivalent members at the undergraduate level and 1 to 400 full-time equivalent members at the graduate level (Heald, 1982). The study also found a largely white, male, and campus-bound faculty (not engaging in off-campus consultancies), who placed primary emphasis on their teaching assignments. Ladd and Lipset (1975) found the same kind of faculty to be supportive of campus activism, black concerns, and student participation, although its self-perception was one of considerable conservatism. They also revealed that education faculty sometimes criticized for lack of scholarship publishes at a rate comparable to other IHE faculty. The latest AAUP study reported that full professors in education, on the average, earn $5,000 less than the mean salary of colleagues and that they rank below all other disciplines (excluding library science and fine arts) in salary levels (AAPU, 1982).

Student overview.—SCDEs span a broad range of enrollments: from 1 to 7,000 full-time equivalent students at the lower division level; from 1 to 7,000 full-time equivalent students at the upper division level; and from 2 to 3,200 full-time equivalent students at the graduate level (Heald, 1982).

Perhaps the most pervasive and serious problems confronting SCDEs have been the decline in enrollment, the attendant curtailment of programs, and the retrenchment of faculty. The National Center for Education Statistics (NCES, 1980) documented that enrollments in education fell from 1.118 million in 1966 to 781,000 in 1978, and the National Education Association (Graybeal, 1981) reported that productivity decreased from an all-time high level of 317,245 in 1972 to 159,485 in 1980—a decrease of 49.7 percent. NCES projected additional declines of another 40 percent during the decade of the 1980s. Parallel to the decline in the number of bachelor's recipients in education is the decline in the number for all bachelor's recipients. Bachelor's recipients in education represented 21 percent of all recipients in 1970–71, but declined to slightly less than 13 percent by 1979–80 (NCES, 1982).

The education student profile exhibits characteristics long associated with the public school teacher. More than 70 percent are female; almost 90 percent are white; the majority come from middle class homes; one-third of their mothers are

homemakers; 50 percent attend universities and colleges no more than 50 miles from home; and one-quarter transferred into their present program from a community or junior college (Joyce, 1977). With all the talk of women taking advantage of other opportunities it is important to note that the teaching field may be becoming more female dominated, not less so. Also, 15 percent of newly qualified to teach do not apply and another 20 percent who do apply for certification do not seek teaching positions. This composite of the preservice teacher candidate is consistent with public perceptions.

Students entering teacher preparation programs often transfer from other college majors. Their documented reasons for entering teacher education include: a desire to work with young people, the opportunity for rendering an important service, and an interest in their subject fields. Extrinsic factors such as employment security, financial rewards, and status are not listed prominently as important incentives (Lorton, 1979).

Additional information suggests that, on the average, individuals who become teachers are less academically qualified than those who enter many other fields (NCES, 1982). Drawing upon the work of Schlechty and Weaver, NCES reported:

"Since 1973, college-bound seniors taking the Scholastic Aptitude Test (SAT) have been asked to choose, from a list, 'the field that would be your first choice for your college curriculum.' Data show that the SAT scores in 1973 of intended education majors were lower than those of all college-bound seniors and, by 1981, the gap in test performance had widened further. The SAT verbal mean score for college-bound seniors whose first choice was education declined from 418 in 1973 to 391 in 1981, a drop of 27 points, while the SAT verbal mean score for all college-bound seniors declined from 445 to 424, a drop of 21 points. At the same time, the SAT math mean score for college-bound seniors whose first choice was education declined from 449 to 418, a drop of 31 points, while the SAT math mean for all college-bound seniors declined from 481 to 466, a drop of 15 points. A comparison of scores between college-bound seniors whose first choice was education and those whose first choice was not education would yield even greater differences (NCES, 1982)."

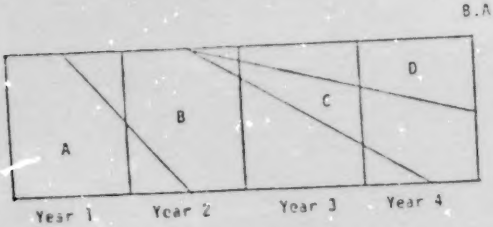
It should be noted, however, that a growing number of studies based on college grades are showing that teacher education students outperform noneducation students in academic subject matter courses. Recent studies in Kentucky (KACTE, 1981) and Wisconsin (Stollee, 1982) found that, in virtually all cases, the mean grade point average of the education majors was above that of the noneducation majors in subject matter courses within the academic disciplines of the noneducation majors.

Job placement overview.—During much of the 1970s, graduates of SCDEs experienced difficulty in finding jobs. A survey of 1974–75 bachelor's degree recipients in Spring 1976 showed that 105,000 of 229,500 newly qualified teaching candidates were not teaching. Two years later, a survey of 1976–77 bachelor's degree recipients indicated that, by Spring 1978, these numbers had declined—71,000 out of 177,200 were not teaching. However, more recent NCES data indicate that 1976–77 bachelor's recipients newly qualified to teach fared much better in the labor market than liberal arts graduates (NCES, 1980).

In the spring of 1982, while school districts in certain parts of the country were laying off teachers, others were reporting unfilled vacancies. This apparent anomaly is due to different growth patterns being experienced in different states, regions, and localities. While the southwest is experiencing net gain (as well as significant teacher shortages), many areas in the northeast continue to experience net losses (and teacher layoffs) (NCES, 1982).

Selected states are reporting "great difficulty in filling positions" in certain assignment areas, while these and other states are indicating "general employment of persons with substandard qualifications." In the Spring of 1980, 30 states were reporting "great difficulty" in finding mathematics teachers, 32 in finding special education teachers for the secondary level and 27 for the elementary level, 18 for the physical sciences and agriculture, and 27 for industrial arts (Graybeal, 1981). Thus, a shortage is evident in many parts of the country and is likely to grow significantly in the coming decade. (For a graphic representation of these phenomena, see Figure 1.)

Typical Four-Year Teacher Preparation Program*



A = General Education

B = Teaching Fields(s) Content

C = Professional Studies

D = Clinical Component

*The proportions of time reflected in the components are to be interpreted as approximate proportions.

Source: Scannell, Dale. Extended Programs for Teacher Education. (A position paper developed by the AACTE Task Force on Extended Programs.) Washington. AACTE, February, 1982.

Figure 1

The magnitude of the shortages remains uncertain because of numerous unanswered questions. These include the following:

Will projected teacher "lay-offs" ameliorate the shortage situation?

Will more favorable economic conditions in the mid-1980s stimulate or retard the numbers of teachers leaving the profession?

Will pupil/teacher ratios stay essentially constant?

Will new Federal categorical programs stimulate additional demands as did earlier efforts for handicapped and bilingual teachers?

Will the pattern of late retirements for teachers shift to correspond more closely with the general population? Given the fact that 22 percent of the teaching force was 50 or older in 1981, how will this affect staffing?

Will increases in student enrollment in SCDEs respond in the usual delayed fashion to the general conditions of the marketplace?

How will the so-called "reserve pool" respond to job opportunities?

Although there is great uncertainty about the potential impact of the "reserve pool" of trained but unplaced teachers and former teachers on any potential shortage, NCES projected that by 1985 the supply of new teachers will fall short of demand by 14.9 percent—with even greater shortages of new teachers likely in the late 1980s (NCES, 1982). Another overlooked but related fact is that the number of members in the 18-21 year old cohort traditionally are drawn will lose over 2.6 million persons, a deline of 15 percent, during this decade. This will force SCDEs to compete with other programs in the university, with the military, and with the job market for potential applicants. This comes at a time when student preferences for teacher education have fallen significantly, and continue to fall; less than 5 percent of last autumn's freshman class indicated a preference for teacher education, which is down almost 30 percent from a decade earlier (Corrigan, 1982). Indications are that this trend is likely to continue.

While supply is affecting this situation shifting enrollment trends at the elementary and secondary levels are exacerbating these conditions. In public elementary schools, enrollment peaked in 1971 at 27.7 million. An enrollment of 24.2 million was reported for the fall of 1979, and a further drop to 23.6 million in 1983. From then on, enrollment may begin to rise slightly again. . . . The Census Bureau has projected that the total population of 5-13 year olds will rise from a low of 29.1 million in 1985 to 32.6 million in 1990. Should the birth rate rise, enrollment could be substantially higher.

If the future pattern of elementary enrollment presents a mixed picture, that for secondary education is much clearer. The Census Bureau projects that the number of 14-17 year olds will fall from 15.8 million in 1980 to 14.4 million in 1985 to 12.8 million by 1990. Only in 1991 will a slight increase begin. Thus, high school enrollment can be expected to fall throughout the 1980s. Not all of these 14-17 year olds, of course, are in school. The National Center for Education Statistics reports that enrollment in grades 9-12 in public schools peaked in 1976 at 14.3 million. It is projected to fall to 12.7 million by 1981, continuing down to 11.8 million in 1986. As a result, the job possibilities for new high school teachers seem to be quite bleak, and high school administrators can expect to face the multiple personnel, curricular and budgetary problems of declining enrollment throughout the decade.

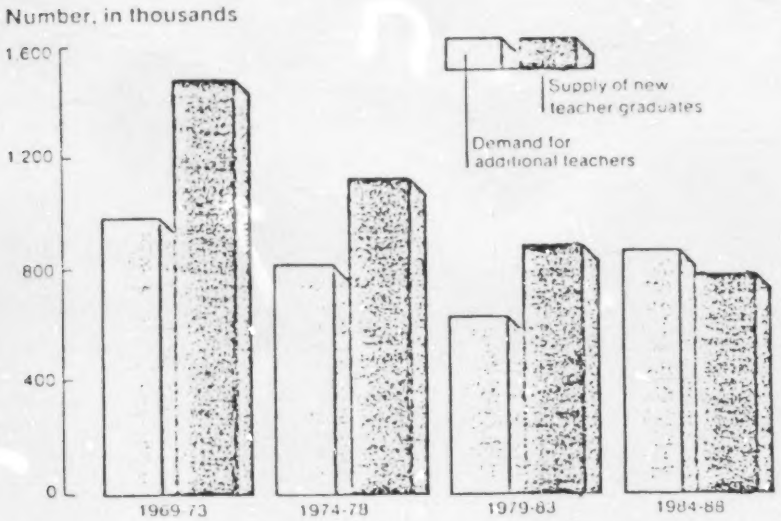
Compounding the shortage problem is the growing use of admission and [illegible] examinations that have resulted, inter alia, in a significant decline in the number of minority applicants for teaching positions. For example, Florida, one of the first states to develop its own teacher certification examination, is experiencing an 80 percent passage rate for all college graduates taking its state-developed tests. However, black students are failing at a rate of nearly 70 percent, while white students are failing at less than a 15 percent rate. Florida certified about 5,500 new teachers in 1981; about 200 were black. As another example, Louisiana is one of several southern states using the National Teacher Examinations (NTE) for certification. Although the overall passage rate is about 70 percent, the percentage of black graduates certified has been in the 10 to 20 percent range. Louisiana certified 2,860 teachers in 1981; the two largest predominantly black institutions produced less than 40 of these (Galambos, 1982).

A number of black teacher educators have noted the potential impact of this phenomenon on staffing patterns for urban schools, and are suggesting that the very existence of the black public school teacher is threatened (Witty, 1982). The increasing minority population, as a percentage of the total population, and the growth of ethnic diversity require that schools be able to respond to a wider range of interests, needs, and backgrounds. Significant recruitment efforts need to be mounted among non-Anglo racial and ethnic groups during the coming decade if the teaching force is to remain representative of the larger society.

Program profile.—Typically, a teacher preparation program is made up of four components: a solid foundation in general education or liberal studies including basic skills; advanced study in one or more academic subjects; professional studies in generic teaching domains, foundational studies, and specialized pedagogical study; and a practicum or student teaching experience.

In fulfilling the requirements of the first two components, an education student may devote from 67 to 75 percent of total coursework hours outside the SCDE, depending on whether he or she is preparing to teach in an elementary or secondary school. (See Figure 2.) Students preparing to teach in an elementary school devote 41 percent of their program to professional study; only 30 percent of a secondary program goes to professional study. In professional courses, students learn a broad repertoire of teaching skills (including knowledge of learners, teaching methods, teaching resources, and assessment procedures), and ways to work successfully with parents, peers, and supervisors.

Estimated demand for additional teachers in elementary and secondary schools and estimated supply of new teacher graduates



SOURCE: Projections of Education Statistics to 1988-89, Department of Education, National Center for Education Statistics

Figure 2

At present, a number of efforts are underway to alter the structure and form of preservice teacher education. In response to recurrent allegations of needless content duplication and watered-down courses are efforts to use systems planning and technology to alleviate duplication and to use a richer assortment of research findings and clinical experiences to enhance course quality. Attempting to arrive at a slimmer but richer curriculum is the objective. Working contrary to this approach, however, is "the ever-lengthening list of curricular accretions in schools, brought on by various societal ills: sexism, racism, economic inequality, illiteracy, domestic instability, unemployment, injustice, urban unrest, social disorder and lawlessness, drug abuse, crime, juvenile delinquency, sexual permissiveness, litigiousness, corruption, and so on ad infinitum—all of which likewise impact upon teacher education" (Lucus, 1981).

Meeting these demands by adding consent to an already overburdened curriculum has been a continuing problem for SCDEs. Sacrificing general education to accommodate these demands is unacceptable. Restructuring and realigning existing programs are appropriate responses, but these threaten the traditional prerequisites of the professoriate.

Extended programs oveview.—A promising response to the time constraints is to extend initial preparatory programs to five or more years. Such a move should accommodate the greater array of research findings and new knowledge, as well as respond to the clamor by external agencies for the addition of new responsibilities (Scannell, 1981). The inadequate amont of time to teach pedagogy during the course of a four-year bachelor's program is one of the major problems confronting teacher education. While there has been an explosion of knowledge in the last 30 years in areas of teaching and learning, there has been a corresponding decline in the amount of time to prepare teachers to use that knowledge. Smith, *et al.* have compared the growth and decline of quarter hours of student preparation for careers in teaching, law, pharmacy, and civil engineering at the University of Florida over the past 50 years. They found that while the other programs increased the time for professional study during the past 30 years, there had been a decline in the number of quarter hours available for teacher education (Smith and Street, 1980). Extended programs for initial preparation seem to offer the best hope for program improvement. Five year plans have already been put into place at schools such as Austin College in Texas, the University of New Hampshire and the University of Kansas. Despite the fact that such programs are more demanding, enrollments have grown in these programs (Benderson, 1982).

Resource overview.—Funding for teacher education is another major concern. Peseau and Orr (1980) completed one phase of an ongoing study and concluded that more is spent educating a typical third-grader ($1,400) than training a teacher ($927). At the same time, according to these researchers, the average expenditure by each full-time equivalent college or university student is $2,363. The fact is that teacher education is a revenue-producing program, which explains in part why it is offered by so many institutions of higher education. As recently as 1977, teacher education generated 11 percent of all university student-credit-hour production but, in return, received less than three percent of the institution's programmatic resources.

The use of a weighted student-credit-hour measure as the quantitative determinant for the distribution of resources within universities is a major source of concern, particularly when SCDEs are expected to conduct an extensive array of outreach or service programs for school districts. Such off-campus activities typically do not generate credit hours and, therefore, do not qualify for university allocations. Some states have recognized this constraint and freed certain percentages of funds for SCDE's to conduct workshops, seminars, or assessment activities for local education agencies.

SCDE responsiveness to preservice conditions.—Given these overviews, the anticipated teacher shortage and the apparent diminished quality of the applicant pool, several likely futures for SCDEs can be projected (Howey, 1981; Denemark, 1981; and Wisniewski, 1981):

The current preoccupation with issues of quality will lead to programs that are more realistic, rational, and rigorous in both general and professional education.

The significant demographic and ethnic shifts our society is experiencing will place new emphasis upon foundational studies in education, i.e., on the premises and assumptions of schooling in a democratic society.

Issues of transitional bilingualism and multicultural or cultural pluralism will receive renewed attention along with elements of global awareness. Legal and ethical questions and the implications of various policies with application to teaching and

learning situations will serve as the focus of renewed efforts in preparation programs.

Rigorous and explicit provisions for the recruitment of talented ethnic minorities into teaching will be effected.

The emphasis upon integration of experiences and coursework in initial preparation programs—culminating in competency examinations—will lead to the setting of goals and objectives that extend beyond individual faculty judgments, and, instead, represent broad institutional agreements on teacher preparation, ending (it is to be hoped) the proliferation of missions and fragmentation of roles that characterize too many SCDEs.

The integration of theory and practice will also lead to renewed emphasis upon "clinical pedagogy," "earlier entry experiences," and "internships," paralleling the recommendations of "A Design for a School of Pedagogy" (Smith et al., 1981).

The magnitude of attention by "significant publics" will cause the majority of preparation programs to become more standardized in terms of their focus, program, and structure with renewed interest in competency-based teacher education, reduction of courses, and individualization of program preparation, thus ending the enormous diversity of programs.

Enlargement of the "life space" provided for initial teacher preparation will occur, with more and more extended programs and master's degree programs appearing, as the constraints and responsibilities of teacher education programs are recognized.

Teacher education will assume greater responsibility for initial entry or beginning teacher programs, including supervision, assessment, and assistance.

There will be greater reliance upon the knowledge base as preservice students become more familiar with the following domains: (a) diagnosis and evaluation of learning (i.e., collection of information about each student to ascertain needs and problems and the ability to undertake formative and summative evaluation); (b) planning and decision making (i.e., knowledge of all those things that constitute proactive teaching—e.g., manipulation of data and information, such as interpreting standardized test scores, responding to recommendations of a school psychologist, and developing courses to sequence actions); (c) management of student conduct (i.e., classroom management and organization); (d) contextual or ecological variables (i.e., an understanding of variables that affect student learning and development); (e) management of instruction (i.e., interactive teacher behavior including a thorough knowledge of different instructional approaches and the use of existing and emerging media); and (f) teacher evaluation and professional responsibilities (i.e., self-assessment and improvement, understanding of responsibilities regarding the profession and the community interpersonal skills).

New emphasis upon technological literacy will generate a demand for teachers who possess minimal competence in the use of computers and other technology, and will lead to critical concerns about equity among SCDEs, with the "have and have not" issue becoming very important. Teacher educators can and must build upon an expanding knowledge base, apply new technology, and develop a futuristic orientation. Quality programs must be based on defensible and sturdy academic standards.

TEACHER EDUCATION PROFILE—INSERVICE PROFESSIONAL DEVELOPMENT

Inservice, staff, professional development, and/or continuing education as it presently exists in the United States is an enormously complex system affecting the nation's 2.2 million teachers, employing as many as a quarter of a million staff development personnel at a cost of millions of dollars. It is a system that is rooted in advanced collegiate preparation through both residential and extension programs of colleges and universities, but also that has witnessed the creation of a whole set of new institutions to provide inservice education and/or staff development opportunities. These latter organizations range from intermediate service centers and local district teacher centers to state department leadership academies and staff development programs (Joyce, 1976).

Local education agencies now provide for "inservice days," "workshops" before the beginning and/or after the conclusion of the school year, and "special conferences" to introduce modified or new curricula. Colleges offer master's degree programs to attract teachers to graduate study. Teacher centers offer district-sponsored credits for participation, independent study, and travel. Important distinctions have emerged between these programs, with local district programs emphasizing how faculty members relate to and learn from each other and how mutual stimulation for growth can develop when professionals work toegether. Collegiate programs have responded by offering more varied academic courses; however, many institutions have

allowed their master's degree programs to decline in quality. According to a recent British observation, "courses are often fragmented and under-staffed . . . in some places, little proof of work is needed; no attempt is made to impose a coherent pattern upon it" (Judge, 1982). This is at least one of the reasons that projections for earned master's degrees suggest reductions of 30 percent during the coming decade (NCES, 1980). There are significant efforts to concentrate on upgrading these courses.

The knowledge explosion suggests that we will need to find ways to provide new and better forms of inservice education. The economic conditions of the country suggest that there will be severe limitations on the availability of resources to accomplish this goal. Incentives need to be found to stimulate collegiate programs to better respond to teacher needs, while other incentives are necessary to serve as motivators for teachers to participate in these programs. Ways of aiding the staff trainers, of improving the process used to deliver knowledge, and of enhancing the substance and content of the presentation need serious examination.

TEACHER EDUCATION PROFILE—ACCREDITATION CERTIFICATION, AND EVALUATION

National accreditation overview.—Accreditation is a process self-imposed by educational institutions to ensure quality control. Two basic kinds of accreditation are practiced, one that considers the institution as a whole, and the other that examines specific programs. Current accreditation procedures for teacher education are program-specific.

Less than half (537) of the 1,340 higher education institutions currently have programs accredited by the National Council for Accreditation of Teacher Education (NCATE). NCATE represents colleges and universities, classroom teachers, and others through 13 stakeholder organizations and associations. While accreditation by NCATE is not mandatory, an increasing number of colleges and universities are seeking the stamp of approval by this national accrediting body. Efforts are currently underway to refocus NCATE, to strengthen its ability to identify both inadequate and high-quality programs, to streamline its procedures, and to reduce costs.

Certification and evaluation overview.—All 50 states have in place procedures for the issuance of teaching certificates to individuals who complete a set of prescribed minimum requirements. These procedures date back to 1825 when the Ohio legislature designated county school superintendents to examine candidates and issue certificates for teaching. Today, all states have centralized teacher certification in their state education agencies, and the completion of an "approval" college or university program in teacher education serves as the basic for certification, with few exceptions. Approval of teacher education programs takes place through the accreditation procedures of NCATE or of the National Association of State Directors of Teacher Education and Certification. Certification is currently undergoing a number of profound changes:

Proliferation of Certificates.—There has been a tremendous proliferation of certificates classified by "type" (teacher, administrator, counselor, etc.), "field" (specialization or teaching field), and "level" (nursery school, kindergarten, middle school, etc.). Georgia currently issues certificates in eight fields, Louisiana has certificates for 8 types of school personnel, and a number of states recognize five distinct school levels.

There is significant debate at present regarding the desire by some to move toward more comprehensive certificates while others, exhibiting considerable distrust of local superintendents and principals with regard to improper assignments, want to retain if not enlarge upon the types, levels, and fields certified. Those seeking reforms in certification will probably have to wait until there are basic curriculum and structural reforms in elementary and secondary schools.

Testing for Initial Certification.—Another concern is the use of standardized tests as integral parts of the certification process. Certification by examination was common as recently as the 1930s when it was gradually replaced by graduation from normal school or college. Today, we see a significant reintroduction of competency-based teacher examinations as a requirement for certification. By 1981, 17 states had adopted provisions for competency-based teacher certification. In 1981, 10 states had provisions in effect, and by 1982, three more were expected to begin. More than half of these had their own state-developed examination, all but one of the rest used the National Teacher Examination (NTE), and one state, South Carolina, used both NTE and a state-developed examination (NCES, 1982).

Emergency Certification.—The pressures of staff availability, scheduling, and funding are causing local education systems to assign teachers to specialized courses for which they are not prepared. All states have provisions for the issuance of interim,

provisional, temporary, and emergency certificates. NIE and NCES, in cooperation with AACTE, are attempting at present to ascertain the numbers of teachers awarded "nonstandard" certificates allowing them to teach out of their field. Reports of "improper assignments" number in the thousands from many parts of the country, with the potential teacher shortage likely to accelerate this problem. Information systems in many states do not have data on the practice of issuing special certificates for persons who do not meet the regular requirements (Roth, 1981).

Parallel to this phenomenon is the waiving of existing certification regulations to enable local systems of employ arts and science graduates to teach subjects for which qualified teachers are unavailable. The Southern Regional Education Board (SREB) has advocated the modification of certification regulations to permit both the use of graduates in mathematics and science "who lack professional education preparation" and "out-of-field" assignments for teachers in "surplus fields" (SREB, 1981). The state of Virginia has recently implemented the SREB recommendation and moved to permit liberal arts graduates to be given provisional certification (Ingalls, 1982).

Performance Assessment Prior to Regular Certification.—other aspects of the current debate on certification center on: (a) delaying initial certification for one (Florida, Oklahoma, and Maryland), two (Virginia), or three years (California and New York) during which the candidate satisfies peers, mentors, principals, and/or college supervisors of their teaching competence while teaching a reduced load; and (b) modifying or eliminating permanent or "lifelong certification" by requiring more frequent renewal, additional semester hours of graduate work or professional development units within specified periods of time, and the use of teacher performance evaluations. Experimentation with both of these aspects of certification is likely to increase in the coming three years.

ISSUES FOR ACTION

Among the host of issues confronting professional education during the forthcoming decade will be those emerging from efforts to:

Reduce the number of schools, colleges, and departments of education offering teacher education and find ways to link institutions with various emerging roles and missions. To effect this, professional school models must be examined, information gathered and analyzed, and the results disseminated.

Recruit and retain a diversified and high-quality faculty in pedagogy at both basic and academic levels within the university and in staff development training positions. To effect this, faculty and staff must be provided with development opportunities including the option of returning to the elementary and secondary classroom; reward and tenure systems must be developed that accommodate the needs of the profession as a whole instead of just the academy's needs. Inexpensive and reliable information systems must be counted upon to provide significant staff development opportunities.

Enhance the quality and quantity of the applicant pool, giving serious attention to the recruitment of talented women and minorities. To effect this, the public image must be changed regarding the role and importance of the teacher and teacher education, and appropriate ways of assessing and evaluating beginning teachers must be found. Tremendous information needs are inherent in these efforts.

Develop professionally sound ways of addressing teacher shortages in numerous fields. To effect this, new staffing patterns for schools, new incentives for teachers, and new technologies for delivery must be explored.

Build more rigorous and realistic preparation programs that draw upon the expanding knowledge base and give renewed attention to bilingual and multicultural issues and global awareness.

Experiment with various structural reforms that provide for extended programs in teacher education, facilitate the entry of beginning teachers into school environments, integrate theory and practice, and rely upon more and earlier clinical experiences.

Examine the appropriateness of a national curriculum for teacher education based on student competence and strengthened assessment procedures. To effect this, programs, goals, and objectives must be constructed that extend beyond individual faculty judgments to represent broad institution-wide agreements on teacher preparation.

Place greater emphasis on technological literacy for the beginning teacher.

Analyze and structure inservice needs of teachers, continue to enhance delivery systems, and effect additional inservice incentives for practicing teachers.

The American Association of Colleges for Teacher Education believes that the Federal government has an important role in addressing these issues. That role involves: national data gathering, support for teacher recruitment programs, support for exemplary teacher education programs, assistance for programs to keep good teachers in the classroom, support for educational research, and strategies to foster school and university collaborative relationships. An AACTE position statement discussing possible Federal initiatives in these areas is attachment A.

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[Attachment A]

AMERICAN ASSOCIATION OF COLLEGES FOR TEACHER EDUCATION—REAUTHORIZATION OPTIONS FOR THE HIGHER EDUCATION ACT

The following statement is submitted on behalf of the American Association of Colleges for Teacher Education (AACTE) regarding reauthorization options for the Higher Education Act (HEA). AACTE encourages continuation of present student and institutional assistance programs encompassed by the Higher Education Act; however, expresses the concern that programs previously authorized by the Act to assist in the preparation of teachers have all been eliminated.

That the action to eliminate these programs should have been taken at the very time that the National Commission on Excellence in Education was preparing its report, is doubly ironic. A Nation At Risk has been the Administration's most important education initiative. In that and parallel reports, monographs and position papers there is one undeniable conclusion: that the teacher is the critical element in enhancing and transforming the schools of this country. Thus, the role and effectiveness of teacher educators is particularly significant to the education of our children and youth. Teacher educators teach teachers, who in turn endow children and youth with the goals and ideals that will shape future society. To ignore or neglect the role of teacher educators in this dynamic cycle of events is to ignore or neglect the welfare of society itself.

AACTE believes that all teacher candidates must be broadly educated in the liberal arts and thoroughly grounded in the subjects that they teach. At the same time we think that parents have the right to expect professionally prepared teachers, able to sequence content and develop approriate curricula, construct tests and interpret standardized scores, effectively manage a class of 30 unique individuals, diagnose various handicapping conditions and develop appropriate individualized programs, understand the laws that shape the rights of both learner and teacher, and possess a repertoire of instructional strategies to use in various situations and with different children.

We believe that the Higher Education Act offers an appropriate vehicle for the federal government to affirm its support for educational excellence through the design of measures to assist institutions of higher education committed to development and improvement of their teacher education programs.

The following set of principles are put forth on behalf of AACTE's 740 schools, colleges, and departments of education and guide our legislative and policy recommendations.

1. Teacher education is the preparation and research arm of the teaching profession.

2. Like other professional preparation programs, teacher education is most effective when it is located on the campus of a significant college or university, where it can have the advantage of a scholarly environment and the support of scholars in the liberal arts and sciences.

3. The process of educating persons to be teachers transforms lay citizens into educators; the difference between an educated person and a professional teacher is pedagogy—the science of teaching.

4. Teacher educators and their schools, colleges, and departments of education must exemplify what they teach.

Preservice and inservice teacher education is a cooperative effort that must recognize the needs and capabilities of colleges and universities, school districts, state government, principals, teachers, parents and students. Although the recommenda-

tions that follow are structured to respond to inquiries specific to the Higher Education Act, it must be stated that these suggestions should be part of a coordinated federal-state-local program of educational reform.

We believe that a new Title V of the Higher Education Act should focus on "Teacher Education, Professional Development, and School-University Collaboration." Discussion of strategies for educational reform within this framework follows.

TEACHER SUPPLY AND DEMAND

1. What is the problem?

There are insufficient accurate national data on the demand for and availability of qualified teachers. Policy makers are unsure how federal resources should be allocated, and potential teaching candidates are confused about job opportunities.

2. What should be done about the problem?

Congress should exercise its authority under the General Education Provisions Act, Part A, Sec. 406 (b) to assess current and future sypply and demand needs for teachers. These data should then be used to direct federal resources for scholarship or loan programs described in the following section.

3. What is the rationale?

Studies looking at the number of undergraduate students who annually receive teaching certificates ignore the fact that many of these students use their very marketable education degrees in other professional arenas. Further, reports by state certification officers on the number of teaching vacancies in their state do not always take into account the nature and number of persons who are employed under an emergency certificate or are teaching out of their field. Without accurate data, appropriate federal, state, and local education policy cannot be designed and implemented.

TEACHER RECRUITMENT

1. What is the problem?

Teacher preparation programs are not attracting sufficient numbers of students with high academic aptitudes or talented representatives from ethnic minorities.

2. What should be done about the problem?

Combined efforts at the state and national levels should be exercised providing funds to support merit based fellowships and scholarships across all teaching fields and levels. In addition, with appropriate support funds, the federal government should stimulate and encourage all of the states to develop student loan programs involving forgiveness features for teaching years of service (e.g., ⅕ of total loan would be forgiven for each year of full-time teaching) in order to attract well qualified, talented individuals to select teaching fields (those constituting the more critical needs) along with recruiting talented ethnic minority representatives to teacher education programs in general.

3. What is the rationale?

Unless we have deliberate, systematic scholarship, fellowship, and forgiveness loan strategies that will serve as incentives to attracting talented individuals, including minority representatives, to teach preparation programs, we will not be able to reverse a trend we have been experiencing for the past decade nor will we be able to marshall the kinds of new talents needed to improve the quality of schooling in the United States.

SUPPORT FOR EXEMPLARY TEACHER PREPARATION PROGRAMS

1. What is the problem?

The problem is that some teacher preparation programs are insufficiently rigorous, demanding, coordinated, and germane to the functional and scholarly preparation of practitioners so that such they can become solidly knowledgable as well as professionally skillful. Instead, the overall curriculum for prospective teachers is the result of numerous political compromises, benign neglect, or underfunded support that is characteristics of the status of teacher education in academe.

2. What should be done about the problem?

Federal funds should be used along with state funds to support exemplary programs that demonstrate high standards of quality and upgraded admission requirements with strong emphasis upon and thoughtful coordination of the following overall components of teacher education:

(a) Strengthened general education requirements.

(b) Improved academic specialization including such emphasis for prospective elementary school teachers.

(c) Required preprofessional studies in select areas cognate to the fields of education.

(d) Reconceptualized professional education requirements that reflect a growing knowledge base and pertinent research.

Such a program would assist schools, colleges and departments of education to (a) use present research knowledge more fully in their teacher preparation programs, (b) develop procedures whereby new research findings are regularly used in course and curriculum modification, (c) encourage institutions of higher education to share this research with elementary and secondary schools, (d) assist prospective teachers to use research in both the content and the process of their teaching, and (e) increase the appreciation of both faculty and students for the role of research in teaching and other aspects of education.

It should be recognized that such exemplary programs and their new requirements might extend beyond a conventional four year baccalaureate program design. Such programs also would involve newly conceived and more extensive clinical experiences for teacher candidates which in turn would call for different collaborative efforts between colleges and universities, the public schools, and state departments of education.

For a number of years the "deans' grant" model has been used successfully to assist colleges and universities to modify and upgrade their education programs to prepare needed special education and bilingual teachers. We believe that such a program is a good way to build the capacity of schools of education to prepare the kinds of teachers all of us want for our schools.

3. What is the rationale?

Attracting more talented individuals to teacher preparation programs must also be accompanied by substantive renovation of the content and design of such programs and upgrading the general standards of teacher education curricula.

RETENTION OF TEACHING PROFESSIONALS

1. What is the problem?

The problem is that there are virtually no incentives or rewards within present systems of schooling to recognize differentiated teacher responsibilities or meritorious performance to attract sufficient numbers of talented individuals, retain them if attracted, or cultivate career commitments to teaching.

2. What should be done about it?

The federal government should encourage states and localities to raise the basic pay of teachers; and to explore merit based pay/career ladder options. Support for evaluation of such programs should be made available through the National Institute of Education.

Salary increases should be complemented by federal, state, and locally supported efforts, to enhance the professional climate in which teachers work. Such efforts could include, for example, substantive staff development programs; sabbatical opportunities for teachers; provision of state-of-the-art teaching materials; and, employment of sufficient support personnel to assist the teaching professionals.

3. What is the rationale?

Efforts and resources to prepare high quality education professionals will be futile unless serious attention is directed to appropriate recognition of a remuneration for these individuals.

SCHOOL AND UNIVERSITY COLLABORATION

1. What is the problem?

The problem is that higher education has been aloof, critical of, or patronizing to society's common schools rather than, as part of the same educational continuum, working as partners in improving the schools. Institutions of higher education have enormous talents and resources that could be directed toward improving the quality of schooling as part of a collaborative enterprise.

2. What should be done about it?

Federal funds should serve as a catalyst for state governments to encourage and facilitate university-school collaborative relationships that could focus on a number of critically important areas:

(a) Educational policy studies.

(b) Curriculum improvement projects.

(c) Instructional systems and technology.

(d) Preservice teacher education with particular emphasis on clinical experiences in field situations.

(e) Inservice teacher education and staff development.

(f) Assessment and evaluation strategies for improving practices.

(g) Assistance to beginning teachers.

Universities and school districts should be encouraged to develop support systems so these new teachers will have the academic and professional assistance they need. Enabling university faculty, peers and system supervisors to assist the beginning teacher while having a reduced work load would be one such way to implement this network.

3. What is the rationale?

The rationale is that the quality of higher education and the quality of education in our common schools as well as the progress of our society are inextricable related. We must encourage, facilitate, and support closer, cooperative working relationships between our universities and our schools if we are to upgrade the quality of formal education significantly and with lasting consequences.

For the past 125 years the American Association of Colleges for Teacher Education, and its predecessor organizations, has represented the interests and concerns of higher education institutions engaged in educational personnel development and educational research. The Association consists of more than 740 collegiate institutions in all 50 states as well as Guam, the Virgin Islands, Puerto Rico and the District of Columbia. Its member institutions produce approximately 90 percent of the newly licensed school personnel each year. Inquiries about AACTE's legislative platform may be addressed to Dr. David Imig, Executive Director, or to Ms. Penelope Earley, Director of State and Federal Relations.

Mr. SIMON. Our final witness is Phillip Schlechty, the professor of education at the University of North Carolina at Chapel Hill.

STATEMENT OF PHILLIP C. SCHLECHTY, PROFESSOR OF EDUCATION, UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL

Mr. SCHLECHTY. Thank you, Mr. Chairman, and members of the committee.

I am pleased and honored to be here. I received an invitation to come on relatively short notice and, therefore, I don't have a complete prepared testimony, although I do have some data that I will submit.

I would like to start out by saying that some of the things I am going to say are going to be controversial, even with this panel.

I am a former associate dean of a school of education. I am presently working with the Charlotte-Mecklenburg schools to deal with developing a career structure. Precisely because I believe what I am saying has caused me to resign as associate dean and maintain my full professor's tenure but move into the public school setting.

I think the discussion about the quality of teaching and teachers is important and the issue is critical to the Nation. I think that many times we are forming the questions wrong, like on the issue of the quality of teacher education. The research that I am going to report I think at least gives some substance to the case that the issue of teacher education may be irrelevant to the debate. What I want to say about that is not that teacher education is relevant or irrelevant but, rather, that the standards of teachers colleges can only be improved when we can in fact create an occupation that will attract the kind of people that can meet those standards.

We started out in 1981 doing research in North Carolina on the quality of people coming into teaching. We used as our measure, because it was the only measure available, the National Teachers Exam with the North Carolina students.

When we finished up we basically found that in that group that came into teaching that the scores are going down. We also found that those who had the highest scores on the national teachers

exam were the most likely to leave teaching. And, indeed, one of the best predicters of ability to stay in teaching is to score well on the teachers exam. One policy implication some people have suggested is that we ought not to admit anyone that scores well on a test and we would have people who would stay in teaching.

I don't happen to believe that. But I think it is an important point that we need to deal with. It is not just a situation within the schools of education. It is a situation in the occupation generally.

Subsequently—and here I may appear a bit defensive, being from the South—folks said that the problem was it was North Carolina data and, therefore, you could expect that in the South. As a consequence, we got hold of the National Longitudinal Survey data and did a similar analysis with the national studies and we found exactly the same patterns in people who came into teaching and dropped out of teaching in that 1972 high school graduating class.

Then we began to listen to the national debate about teachers colleges lowering their quality by admitting, apparently, students who score lower.

Coming out of the 1950's and from the Midwest, where we had expanding teachers colleges, I found it very difficult to believe that some teachers colleges could be lowering their standards because some of them had pretty low standards in the 1950's.

So we began to ask the question: Is it the fact that teachers colleges are lowering their standards, or is it the fact that we don't have as many people who are meeting higher standards coming into teachers colleges? And we thought North Carolina gave us a good place to start again within another local study. And that is the study I want to address myself specifically to today.

We started out with the same data set that we had used in 1980 about people who dropped out of teaching. But this time we looked at the institutions of higher education from which they graduated at different periods in time. And what we started with was a series of three questions, basically.

We asked ourselves the question: Is there empirical evidence to support the proposition that teacher training institutions can offset the effects of declining interest in teaching and maintain the numbers, or at least their market share for a declining market, by introducing more students who score lower?

We also asked the question: Do all institutions of higher education lower their standards if that turns out to be the case?

And finally, what is the situation if there is variability, what kind of institutions are doing what, and what happens to their market share?

Quickly and simply, what we found was this: We took the people who actually gained employment in the State of North Carolina in 1973 and 1974 and the people who actually gained employment in the State of North Carolina in 1979 and 1980 who graduated from one of the then 44 institutions of higher education that produced teachers.

We categorized those institutions in terms of the proportion of people who graduated and who scored high on the NTE and essentially said those who produced a large proportion, we called those the high quality institutions, and those that produced the low proportion, the low quality.

What we found was that those institutions that held the line very simply between 1973 and 1980 or improved, lost more students than any other institutions. Those institutions that had very low standards were losing students as well. The institutions that were maintaining their position were the relatively stronger teachers colleges.

Mr. SIMON. If I may interrupt just for a moment.

Mr. SCHLECHTY. Yes, sir.

Mr. SIMON. Unfortunately, Mr. Coleman and I have to go over to the floor. Mr. Gunderson is going to take the chair. I would like each of you—if I can ask Mr. Gunderson to do this—in responding, the first question I would address to you, if you were a member of this subcommittee and were reauthorizing the Higher Education Act, what would you be doing in the way of title V? What should we be doing as a Congress, anyway?

I am going to turn the chair over to you, Steve.

Mr. SCHLECHTY. Very quickly I will finish with this, the study is available. But basically what we found—I want to back up and repeat this again—what we found is that there were some institutions of higher education in the State of North Carolina that maintained the proportion of high scoring students that they were producing between 1973, 1974, 1979, 1980. While those institutions of higher education lost market share of teachers actually placed at a substantially higher rate than other institutions, everyone lost market share. We employed about 24 percent fewer teachers in the State of North Carolina in 1979 and 1980 than we did in 1973 and 1974. But we employed 45 percent fewer teachers who scored high in the highest category on the NTE and employed only 8 percent fewer to score in the lowest category.

When we looked at those institutions that continued to produce a large proportion of teachers, their enrollments went down and their market share went down. Those institutions that historically produced a higher proportion of low scoring students—but weak teachers colleges—were losing enrollment rapidly too. But the places that were gaining were those middle range institutions that apparently—and we have no data to support this—now were taking students that used to be admitted into weaker institutions. But because we didn't look at all students who graduated, we have been very cautious in our findings.

I guess what we are really trying to say is we are dealing with the issue of teacher quality, by dealing with the quality of teacher education institutions at this particular point. I am not very defensive about teachers colleges. I have made some public statements and written statements suggesting that a lot of teachers colleges should be closed. I think there is good reason for that in this debate, so it is not a matter of defense. I think it happens to be irrelevant in some ways to the issue because the issue is really one of the occupation in general and the way teachers colleges are related to public schools, are related to the professional organizations, and are related to career opportunities—the quality issue.

If you look at the quality issue, it is primarily in white females and minorities; and that is a demographic function and occupational function. Women and minorities, as everyone is now saying, have other opportunities.

We had another captive group we no longer have coming into teachers colleges and that is people with a GI bill, first-generation white men, who also use teaching as an upward mobility step. Those folks are no longer available, so we simply don't have the quality of people coming into teacher education to meet the kind of rigor that we say that we want in teacher education.

It seems to me we have to tie reform in teacher education together with reform in the public schools simultaneously. And to do one without the other, and to develop policy that doesn't take both into account, I think, will eventually lead us into a position in which the year 2000 public school teachers will in fact be as bad as some people say that they are now.

I don't happen to think that they are that bad but I think that we are headed in that direction.

Thank you, sir.

Mr. GUNDERSON [presiding]. Thank you.

I want to apologize for the chairman and Mr. Coleman. As you all know, we are trying to finish up the legislative session this week, and that means conference report after conference report that is coming up. They ran over to the floor because the conference report on tribally controlled community colleges is scheduled to come up any minute. And as the chairman and ranking member of the subcommittee, they need to handle that.

This committee is also dealing with another conference committee that is meeting this afternoon. So we apologize for those type of things.

Let's begin with the chairman's question to each and every one of you regarding title V and the reauthorization as to your particular response as to where that ought to go, and what this subcommittee ought to be doing in regards to much of the data that you have provided us. Anybody who so desires.

Mr. SCHLECHTY. I would be happy to.

Mr. GUNDERSON. Go ahead, you are in practice right now.

Mr. SCHLECHTY. All right, I am in practice.

It seems to me that there is a lot of emphasis upon doing things for teachers colleges or to teachers colleges. I am all in favor of that if one wants to do that.

But I think the more important issue is how do we get quality people into teachers colleges? And how do we hold teachers colleges accountable for making sure that they get quality service?

We have got 1,200 institutions of higher education, or thereabouts—Dr. Imig has it at 1203—that are producing teachers. In the first place, I think that is far too many. It is a large number of institutions. So anything that we do that encourages either the maintenance or the numbers of institutions of higher education we have producing teachers, or encourages even more institutions of higher education to go into the business of producing teachers, would be, I think, unwise.

I think the more important fact is that, as an illustration, teachers' children don't go into teaching, particularly male teachers' children. This first generation—white men who went into teaching on the GI bill—don't send their children into teaching. They send them into some other occupation.

So the issue is how do we get the kind of people for whom teaching is an advantage to teach and provide us with that kind of quality service?

Given that issue, I would start out with the proposition that if we have scholarships for teacher education majors that we tie it together with need.

In other words, ability and need ought to be tied together.

My daughters would be very happy to take a tuition or remission scholarship if someone would provide them that, and stay in teaching 2 years, and then do what they really wanted to do.

What we really need is something that says here is a person, a young man or a young woman, who otherwise might not have an opportunity to go to college, who is very able, that we could begin to give them a scholarship that said you go into teaching for 3 or 4 years and into teacher education for 3 or 4 years. And some of those folks will be captured—just as we captured some mighty good folks in the 1950's and 1960's who came in on the GI bill, and so forth. I think we could do the same thing now but I think we have to tie those two issues together. Otherwise, we are going to be essentially playing for the education of children—my children—who I am going to educate anyway. And that really concerns me.

So that is one of the places where I would start, sir.

Mr. GUNDERSON. Let me just follow that up before I go on to the rest of you.

The dilemma that we have had in this committee when we have been dealing with the science and math, et cetera, in this whole area—and it has been mentioned by some of you in your testimony today, for example, that there are no indications that there is going to be universal across-the-board need or demand for teachers in this country.

How do we resolve that with what you have just suggested? And, second, with the limited number of resources, how do we solve the problem of targeting those resources to get the best benefit—two different issues——

Mr. SCHLECHTY. OK.

Mr. GUNDERSON [continuing]. Two different conflicts of what you have said. And I would be interested to find out.

Mr. SCHLECHTY. OK, just one quick answer to that.

I would give control of the scholarships to the public schools, not to the university.

I think that if the public school had a scholarship fund that they could use to essentially look down the road and say 4 years from now we are going to need *x* kind of teachers, that we will begin to provide scholarships to people on the guarantee that they will come back. Given the localism of teaching anyway, as you are pointing out, they will come back and teach. Different localities have different kind of needs.

Second, we may find that in some school systems, given demographics, the need is for scholarships to attend college to pursue continuing education opportunities as opposed to using scholarships to recruit new teachers.

I think that if we had some sort of a scholarship fund that fundamentally was given to local school districts—that they could use for the purpose of negotiating—with individuals and with institutions

of higher education to respond to the kind of needs that they have, we might be in a position to deal with the market-sensitive situations in different localities, the demographic-sensitive situations in different localities. We should at the same time, assure, I think with some guidelines, that these scholarships ought to go to people who are academically able and are tied to the proposition of serving in the public schools for some period of time.

That is the way I would proceed with it.

Mr. GUNDERSON. OK. Now let us move on in regards to Chairman Simon's question.

Ms. FEISTRITZER. I would encourage the Congress to do anything it can to upgrade the status of teaching. I think we need to revamp the definition of teachers in this country.

There is a good bit of data that support that teaching is not really treated as a profession. We treat it more as an occupation. Professions require, as I said in my earlier testimony, rather rigorous rites of passage for getting into them; they require certain behaviors and performances once you are in them.

I think that whatever Congress can do to encourage both ends of that entry into teaching and performance standards once they are in it. I think your recent hearings and concern about merit pay for teachers and the master teacher concept is very much to be lauded. I think that is the direction that we might more carefully pay attention to.

I think we also——

Mr. GUNDERSON. I hate to interrupt, but I am interested in your comments as to whether we ought to be doing something on that merit pay concept at the Federal level—do you believe this is the place for it?

Ms. FEISTRITZER. The Congress has infinitely more wisdom about the way it conducts its affairs than I do.

Mr. GUNDERSON. Don't count on it. [Laughter.]

Ms. FEISTRITZER. I recently was a participant on a panel at the 20th Century Fund that looked at merit pay and master teachers, and I was very much impressed with a paper that I would recommend to you, written by David Savage of the Los Angeles Times. He did a very good analysis of the whole concept of merit pay, both in the business world and as it historically has been tried in educational communities.

I personally was in favor of merit pay more than I am now, having read his analysis of merit pay in a variety of contexts.

I think the master teacher concept, which is based more on the career ladder notion, which most professions have, where you move up based on your competence on the job, not only in what you are paid but what your functions are, is something that I would very much favor.

I think the discussions you have been having about the scholarship programs attracting more academically able people into teaching is very, very laudable.

What I would encourage you to do, since you have asked me, is to tie the preparation of those teachers that you may be giving scholarships to, to the institutions that are preparing them to teach.

I think we need to get rid of the notion of provinciality among teaching in this country. Historically, teaching has been and continues to be composed of 70 percent women. Most of the women who have chosen teaching historically went into it because they felt it was the highest profession they could go into.

But there is another very important reason why teaching became a women's profession. Teaching, as it has been defined, is a nice job for a woman who wants to be a wife and mother. The school day used to end at 3:30, and they have weekends pretty much off and summers off. It has been a very attractive occupation before we had so many single-parent families where you have women needing to make a lot more than $17,000 a year to support a family.

So there are a whole lot of sociological changes that have changed what women have been very happy to do in the past.

I think that that attitude—the provinciality of teaching, women who were providing second incomes for families, and so on, who were pretty much rooted in the home and in the family—that is no longer the case.

I think it is a good time to be encouraging teachers to prepare to teach, not necessarily down the road from where they were born, or where they plan to teach.

I think if most of the institutions preparing teachers are located in the northeastern part of the country, and the greatest demand for teachers is in the southwest, we might tie scholarship programs in such a way that those teachers might be encouraged to go to the best teacher preparation institutions—and I think we know a good bit about where those are—and encourage teachers to move around in this country.

I also, in conclusion, would like to say that I don't think we need to think any longer of lifelong careers for teachers. The average age of a classroom teacher now is near 40 years old, and they have 12 years experience. It is a longstanding profession and we tend to think of it in terms of lifelong careers.

If we can get the best and brightest committed to teach for 5 years and move on to other things, I would be very much in favor of that.

I don't know that we need to keep a teacher in a single profession any longer than we do any other profession in our society today.

Ms. ELDRIDGE. Mr. Gunderson, I would like to initially state that I am very pleased that the data from the National Center are providing to all the witnesses substantial input to their development of their own views. That is the function of the Center to provide very objective data and, needless to say, I am pleased to see the importance these data have played this morning.

In reference to the questions you have asked us at the request of Mr. Simon, it is the same question he asked when I appeared a few weeks ago on college costs. I believe my answer is going to be very similar in a sense.

Our data and all the other data that we are seeing seems to indicate that there are two primary problems. One, to attract a quality student to this profession, and hopefully, to continue to see it as a profession and not a trade.

And once they are there, to provide them with an education that equips them to perform the function adequately.

It seems to me that there is the nub of much of the problem. And it ties back, again, to a suggestion I made when I appeared earlier before this committee in terms of looking in some intensive way at the cost-benefit aspects of higher education in general as well as, and perhaps most particularly, in terms of the cost benefits that we are getting from the schools of education today.

Certainly if we have a large proportion of the graduates graduating and not being able to pass the competency tests, there is a very serious problem. And it is a problem in the use of our resources. And I do think this committee should look at that.

Thank you, sir.

Mr. GUNDERSON. Thank you.

Mr. IMIG. Mr. Gunderson, first of all, I would recommend that the basic shell for title V be stripped of its present six components.

First we need to spend some effort looking at the data base. I think what we have shown this morning is the fact that there is an enormous amount of data that still need to be collected. I think that to go back particularly into the general education provisions and section 406, which authorizes the National Center for Education Statistics and to see if the provisions there around the gathering of data on supply and demand, and so forth, could be strengthened toward the end of helping Dr. Eldridge and others have the data.

Second, I think that we need to look at ways of attracting more qualified and talented students into teacher education. We have looked very carefully at Representative Wyden's Talented Teachers Act, and think there is considerable merit in many of the provisions that are there, and would see that as perhaps setting a direction for the subcommittee.

Third, I would recommend that there be some allocation of nominal resources, and perhaps more an earmarking of present resources, toward the end of helping faculty in schools of education to compete for current Federal sabbatical grant programs toward the end of affecting their capability.

Fourth, I think that one of the problems that we have touched on but maybe not addressed as critically as we need to, is the whole question of performance evaluation as distinct from competency measures and helping local education agencies and State departments and institutions of higher education address that through some kind of grant to State departments to look more seriously at the whole question of placement, recruitment and evaluation for teacher candidates.

Fifth, to facilitate and encourage university-school partnerships. My testimony was saying it is a universitywide responsibility to prepare teachers, on the other hand, it is a schoolwide responsibility to develop their faculties. And if we can begin to intermingle those responsibilities and to see the K-12 and the higher education continuum as a single continuum with a single kind of responsibility, I think we would achieve much that could be accomplished.

Finally, I think that a sixth recommendation would be to look seriously at ways of providing better sabbatical opportunities for

practicing teachers in elementary and secondary schools and greater opportunities for professional development programs.

Mr. GUNDERSON. OK. Mr. Packard?

Mr. PACKARD. Thank you, Mr. Gunderson.

Sorry I couldn't be here for all of your testimony. I tried to get most of it, but I had to participate in another committee hearing, too.

I have been intrigued with your testimony, written as well as verbal, because you are discussing one of the most critical issues that we consider as we try to improve the quality of education in America—the quality of our teachers, teacher selection, and the profession itself.

Frankly, I have to agree with what I have heard, and that is that I have seen in my lifetime, the change of what I felt and what I was raised to understand to be one of the more noble professions in existence. And I have always looked upon it in that same light and that has not changed in my mind.

But I have seen that noble profession change in the short time that I have had experience with teaching.

I don't know what all of the answers are. Certainly I think that it has tended to move. During my 12 years on a school board I saw the teaching profession change from a very altruistic type of a profession where men and women were teaching for other than the monetary reasons.

The nobility, the altruism, and so forth, has virtually disappeared from the profession, and unless a profession has that, it is not a profession; it really isn't. It is a unionized type of an occupation. The profession must find ways to change if it is to return to the level of nobility it once held.

As I have watched this transition take place, I have recognized that in order to make the changes, the incentives to teach are no longer the same.

Now, people, when I was a child, often taught for altruistic reasons. They were more important to them than the actual money that they received. Now, it is almost totally the opposite. The incentives are not altruism or the love of doing something for children as much as it is what is in it for the individual. That is where I have seen the real changes.

So that the incentives to attract bright minds and talented people are gone. To bring them back, I am not convinced that only money is important. I think that there is no question we have to raise salaries, because people go into the professions because they have great opportunity for financial growth and advancement. I am a professional myself. I have thought often why I went into the profession that I did. It had all of the things that the teaching profession once had except financial remuneration and opportunity. Teaching has never had that to the level that it deserves.

Let me ask a question to which some of you may know the answer. I am not sure that I will get an answer.

Do you have any figures or any indication as to how many teachers are unemployed. Let me restate it.

What percentage of teachers unemployed or involuntarily employed in other occupations do we find in the profession now? Do you have any figure as to how many who went into teaching or at

least went into college to become teachers who are not in the teaching profession because they have been required to go outside the field—not those who have chosen to abandon the field?

Mr. IMIG. I know that Dr. Feistritzer has some data on this and I know that Dr. Schlechty has written on this.

I think one of the important characteristics about the student in teacher education is the fact that 10 percent of the students in teacher education never intend to teach. They go into teacher education for some of the reasons that I think you are espousing and they leave. Fifteen percent say that they intend to teach but never apply for certification.

So you have a whole cohort of students, a quarter of the enrollment in schools of education that bring with them certain kinds of characteristics and traits and also make career choices other than public school teaching.

One of the important demographic findings of the seventies is that those students have had remarkable success in finding jobs in other occupations. They are serving as trainers, they are serving as tellers in banks. Either through necessity or because of career preference. They have chosen alternative careers. A teacher education program happened to be a good preparation program for them.

Mr. PACKARD. I am talking primarily, though, not about those who never intended to go in or those who went through the schools but never finished their certification process.

I am talking about those who intended to go into education and to teach but because they have not been able either to get a job or have not been satisfied with a job because of its perks and other reasons, and have dropped out of the profession or are either unemployed or in another profession involuntarily.

Mr. SCHLECHTY. I do not know of any good data that are available on that. I have looked for it myself. I know some data about what percent didn't get jobs last year—the NCES has data on that—and applied for jobs. There are those numbers available but I don't happen to have them right here.

What we do know is that of those teachers that we first employ—and this is something that is often overlooked—approximately 10 percent of all the adults who are college educated in this country are schoolteachers.

Another 10 percent are former schoolteachers. About a fifth of all the college-educated adults in this country are teachers or former schoolteachers. Then we add to that education majors, it goes up even higher.

There is some evidence that indicates that once a person doesn't get a teaching job and doesn't get a job as an aide or some education-related job, and goes away—when they are given the opportunity to teach they are less likely to come back.

I think there is some overestimation of how much that residual pool out there is just dying to get into teaching. I think that they did, but once they got away, I don't think there are as many of them available to come back. At least there is some evidence but we don't have hard numbers on that.

Mr. PACKARD. What I am getting at, I guess, is a comment that I got here just in time to hear you make in your testimony, and that is that we have been producing too many teachers. That intrigued

me. That, perhaps, is for a variety of reasons. One may be because the standards of getting into teaching are far too low and I think I have heard that from almost all of you. I totally agree with that.

I went to dental school. I had to work very hard to get into dental school, just to be accepted into dental school. There were achievement requirements that just weeded out enough that it made it very difficult to get in.

I have wondered why such a noble profession as teaching has not lifted its requirements that would attract the better students normally. Obviously, the teaching profession has been receiving over the last many years the leftovers of all of the other professions that have requirements that preclude them from getting in.

Now, that may be oversimplification but I am sure that that is part of it. And that is why the bottom quartile are going into education if the statistics and the reports that we have been hearing and reading are true.

What do you think ought to be done and how do you think it ought to be done in order to lift the entrance requirements for the teaching profession in the universities and colleges?

Ms. FEISTRITZER. First of all, I favor some national criteria that would have to be met across States. I can think of a national proficiency exam for teachers that is not a minimum competency or literacy exam.

Mr. PACKARD. Are you suggesting that as an entrance requirement or at the conclusion of a teaching education?

Ms. FEISTRITZER. At the conclusion of it. The kind of exam that I favor would be analogous to the CPA for accountants. It is given on a State-by-State basis but it certifies you to become a public accountant. And I think there should be an exam similar to that for the teaching profession that, again, would occur on a State-by-State basis but would be a national exam.

Mr. PACKARD. I think that certainly has merit. Obviously, when we conclude a professional education, we are requested and required to take certain competency exams in order to be certified or to pass a bar or to pass a State board.

But that does not necessarily improve the quality of preparation for teachers and lift that because, again, it is very costly. I can only use my own school experience as an example. It is very costly to educate 100 dental students and flunk 40 or 50 percent of them. It is very costly, in terms of manpower, in terms of educational strength, and just plain cost, because every dental student is subsidized to some degree by the system educating them.

That would be an inefficient way of producing quality teachers. If you don't stop the input of weak potential teachers some way you are going to have to have a very expensive process of weeding them out at the end of the pipeline. Perhaps we need to have a combination of both.

Ms. FEISTRITZER. I was getting to the combination. I think we need to raise the standards going in. I am in favor of doing with teacher preparation institutions. I think we have really allowed them to proliferate. There are 146 law schools and about 123 medical schools, and over 1,200 institutions for preparing teachers. Now, I also know that there are a lot more teachers being prepared than there are doctors.

Mr. PACKARD. Those same institutions limit the number that they will accept in each class.

Ms. FEISTRITZER. Right, right. So I think we could do with much higher grade point average requirements for people going into teaching. I think since two-thirds of the students who go to college in this country take the SAT exam, that there is some merit to continuing to use SAT scores as some measure of a person's ability to perform academically in college, even for education majors. And I would favor a cutoff score for education majors much as other professions have, or intended college majors have.

Just to reemphasize what I said before, I don't know that we need to set those and continue to have every institution preparing teachers in the country meet those standards.

I would start with picking the institutions in this country that historically have done a good job and do have high standards already and do have highly credentialed faculties, and do turn out students who are the best teachers that we have in the Nation's classrooms today. Start with those institutions and encourage persons to go to them to prepare rather than saying all 1,206 institutions preparing teachers now require all their entering people to have a 2.5 or a 3.0 grade point average.

So I think there should be a combination of raising standards and being highly selective about teacher preparation institutions.

Mr. PACKARD. I am using more time but I am not through. Would you permit me a little more time? Are we under the 5-minute rule?

Mr. GUNDERSON. I think they have some more comments here that they want to respond to.

Mr. PACKARD. Then I want to ask a followup question.

Ms. ELDRIDGE. Mr. Packard, in terms of these efficiencies and preparing students who perhaps do not follow through with the profession for a variety of reasons, we do have some basic data that is relatively current indicating that 40 percent of the students in the 1979-80 education pool cohort did not apply for teaching jobs—40 percent.

Mr. PACKARD. Do you think, though, that there is a reason for that?

Ms. ELDRIDGE. We queried them in terms of for their reasons why.

Mr. PACKARD. Because we do not have 40 percent or even 10 percent of the medical students who don't go into medicine after they have graduated, and dental students——

Ms. ELDRIDGE. Ninety percent of that 40 percent said they did not want to teach, and 10 percent said they wanted to teach but they found teaching jobs too difficult to get.

That, I think, is an extremely important factor in terms of this whole cost efficiency that I continue to speak about and that you have alluded to and have drawn the parallel to the dental schools. The dropout rate seems to be rather severe.

Mr. SCHLECHTY. Always has been.

Mr. IMIG. Mr. Packard, those are startling data. But I think the point is that many students in teacher education have used the program for other purposes—the kind of thing that Dr. Feistritzer talked about in terms of parenting, they have seen the teacher edu-

cation as leaning to that, as being an adequate program. They never intended to teach. It is a convenient place within the university.

I think that by drawing the analogy to dental schools, though, you have helped to shape a very important question that needs to be asked, and that is, Should teacher education occur in professional schools?

There are many in this room who would advocate that indeed we should begin to look at teacher education or education as occurring in a professional school after the baccalaureate has been completed. There is sufficient knowledge that that is a way to achieve the kind of quality and excellence that I think you are espousing.

Indeed, when we now spend more in terms of training those who are going to care for our animals, namely, veterinarians, than we do on training those who are going to care for our children, there are some significant policy questions that do need to be raised.

Mr. PACKARD Let me ask a followup question, then I will conclude.

Do you think that the Federal Government ought to take the leading role in regulating these entrance exams and these requirements to get into the profession, or do you think that they ought to be regulated within the teaching organizations, the educational system, or a combination of both?

Ms. ELDRIDGE. I would pass on that, Mr. Packard. [Laughter.]

Mr. SCHLECHTY. I won't pass. I don't think the Federal Government should get involved in establishing standards for the teaching occupation or the teaching profession. I don't think that is a Federal role.

I would agree that we need some sort of uniformity but I think that becomes a discipline act within the business itself, whether that is going to have to take place at the State Department level or whether it is going to have to take place with organizations like the American Association of Colleges for Teacher Education.

I think there has to be some push and some incentive to make that happen, because professional organizations, whether it is the American Dental Association or whether it is American teachers organizations, have a conservative, self-protective kind of stance. In the end you have to represent your members—we have to understand that.

I am sure that the American Association of Colleges for Teacher Education doesn't like to hear someone say let's close down some of those places that are paying dues to keep that place operating.

The American Medical Association was confronted with the same problem in 1906 before the Flexner report, and they tried to issue something like the Flexner report and finally had to get the Carnegie Foundation to do it for them, because the leadership really couldn't bring to bear the kind of pressure they needed to bring to bear.

So I want to be very clear that I think some sort of standards need to be made but I think we have to talk about two kind of standards. Standards for people, individuals, and standards for institutions. I think it is very easy to talk about standards for individuals. When we start talking about institutional standards, for example cutting off the bottom of individuals does nothing to make

sure that the institution doesn't admit everybody as close to the bottom as they can get them to keep their enrollments up.

We may have to establish a median for institutions and a minimum for individuals in order to deal with this sort of a thing.

Mr. PACKARD. Good point.

I have one question further and that is, with the number of teachers that are out there now that are not in the teaching profession for a variety of reasons, do you think that the emphasis ought to be on retraining them to make them more qualified or to get them into the teaching field? Or would it be better to upgrade the new crop of teachers that is yet to come?

Ms. FEISTRITZER. There is already a good bit of data to support that people who don't go into teaching right away don't go into teaching, and they don't come back into it.

I think that it would be much more advantageous to start with recruitment of new people, even over retraining the people who are currently teaching. It is a perfect time for it because the demand for new teachers is just going to start on the rise now. I think you have to start somewhere and I would start with recruitment and raising standards of people going into the profession who have not already been trained.

Mr. SCHLECHTY. Just one thing. I think we talked about teachers that we need to think about the quality issue that is embedded in the way schools are managed. I really think we need to think about retraining competent school managers, if we want to talk about a retraining issue, to run schools in such a way that if we get bright people in those schools—and we have got a lot of bright people out there right now that are burning out, as it were. That is one of the problems that we have: How do we get schools organized and managed?

It seems to me that talking about the teacher issue tends to focus on the teacher rather than on the problem. And the problem really is embedded in those institutions and the way they are run and the way they are managed. I think we really ought to look at retraining of administrators to run schools. When I was in college, one day a professor asked me what would happen if peace broke out?

We ought to ask ourselves what would happen to a school if we had only master teachers in it? What kind of administrator would it take to run a school with master teachers and begin retraining administrators to encourage that sort of a thing? And we may get this issue resolved differently.

Mr. PACKARD. I really do appreciate this stimulating discussion as well as the testimony that each of you gave. I think it is a vital part of this whole process of upgrading and bringing excellence back into our education system. Thank you.

Mr. GUNDERSON. I don't know if it is that there is only a couple of us here, or the fact that Mr. Packard is a member of my own party, but under the 5-minute rule he has just consumed 25 minutes. [Laughter.]

The only problem with that is that I, 20 minutes ago, had a major appointment that I do need to make, so I am going to withhold some of my questions. But I just can't tell you how fascinating this data has been. I think it is helpful, very much so, to us in the perspective of the reauthorization process.

And from a very personal perspective, I have to tell you that yesterday I agreed to make a speech to the Wisconsin State School Board's Convention, and I can tell you that much of what you have said here today will be a basis for writing that speech. [Laughter.]

So I very much appreciate your testimony. With that, thank you all very, very much for coming.

The hearing stands adjourned subject to the call of the Chair.

[Whereupon, at 11:55 a.m., the subcommittee was adjourned, to reconvene subject to the call of the Chair.]